

NEC Desktop Terminal Support Matrix



Terminal Group	New Terminals DT400/DT800 UT880	DT300/DT700	Series i	Series E and Prior
SV9100	Yes	Yes	No	No
SV9300	Yes	Yes	Compatible⁴	No
SV9500	Yes	Yes	Compatible⁴	No
SV8100	Limited^{1,2}	Yes	Yes	No
SV8300	Limited^{1,2}	Yes	Yes	Yes
SV8500	Limited^{1,2,3}	Yes	Yes	Yes

1) UT880 NOT supported on SV8000 Series

2) “Retro Mode Only” SV8100 R9.5; SV8300 R9; SV8500 S8+ (See release notes, delayed user guide availability for SV8500 series, no planned UG SV8100 or SV8300)

3) SV8500 requires S8 or newer; SPA-16ELCN-A or later for Digital

4) Device is compatible, but feature support may be limited in future releases. Note: Series I terminals are End of Support September 2014 ref: NPB-TER-11-004

UNIVERGE SV9300

Networking Manual

LIABILITY DISCLAIMER

NEC Corporation reserves the right to change the specifications, functions, or features, at any time, without notice.

NEC Corporation has prepared this document for use by its employees and customers. The information contained herein is the property of NEC Corporation and shall not be reproduced without prior written approval from NEC Corporation.

D^{term} is a registered trademark of NEC Corporation.
PCPro is a trademark of NEC Corporation.

Copyright 2014

NEC Corporation

TABLE OF CONTENTS

INTRODUCTION

PURPOSE	1
OUTLINE OF THIS MANUAL	2
TERMS IN THIS MANUAL	3
PBX System Designation	3
Attendant Console Name	3
Terminal Name	4
REFERENCE MANUAL	5
HOW TO READ THIS MANUAL	6
PRECAUTIONS	7
System Data Backup	7

Chapter 1 CCIS FEATURES

SYSTEM OUTLINE	1-2
PLO	1-3
No. 7 CCIS	1-4
Centralized Billing	1-5
Inter-Office Digital Data Transmission through No. 7 CCIS	1-7
TIME SLOT ASSIGNMENT CONDITION	1-8
Time Slot Allocation for CCT Blade	1-8
Number of Time Slots Required for CCT Blade	1-9
CCT SPECIFICATIONS	1-10
Transmission Characteristics	1-10
Frame Configuration of 24CCT	1-11
Frame Configuration of 30CCT	1-15
MODEM Specifications	1-16
SERVICES	1-17
NETWORK STRUCTURE CONSIDERATIONS	1-20
Determining System Configuration	1-20
Determining Number of No. 7 CCIS Routes	1-20
Determining Type of Transmission Lines	1-20
Determining Which PBX Should Be Main Office	1-21
Determining Point Code	1-22
Determining CCH Link to Send Messages	1-24
Determining Numbering Plan	1-26

Determining Route Advance	1-33
Network Construction with 2400 IPX	1-36
CCIS BASIC PROGRAMMING	1-37
Digital Trunk Data Assignment	1-38
Numbering Plan Assignment	1-46
Inter-Tenant Connection Assignment	1-51
Sample Data Programming for Open Numbering System	1-54
Sample Data Programming for Closed Numbering System	1-59
Route Advance Assignment	1-64
CCIS FEATURE PROGRAMMING	1-68
ATTENDANT CAMP-ON WITH TONE INDICATION-CCIS	1-69
AUTOMATIC RECALL-CCIS	1-71
BROKERAGE-HOT LINE-CCIS	1-72
BUSY LAMP FIELD (BLF)-CCIS	1-75
BUSY VERIFICATION-CCIS	1-80
CALL BACK-CCIS	1-82
CALL FORWARDING-ALL CALLS-CCIS /	
MULTIPLE CALL FORWARDING-ALL CALLS-CCIS	1-85
CALL FORWARDING-BUSY LINE-CCIS /	
MULTIPLE CALL FORWARDING-BUSY LINE-CCIS	1-92
CALL FORWARDING-NO ANSWER-CCIS /	
MULTIPLE CALL FORWARDING-NO ANSWER-CCIS	1-99
CALL FORWARDING-INTERCEPT-CCIS	1-106
CALL FORWARDING-OVERRIDE-CCIS	1-108
CALL TRANSFER-ALL CALLS-CCIS	1-109
CALL TRANSFER-ATTENDANT-CCIS	1-111
CALLING NAME DISPLAY-CCIS	1-113
CALLING NUMBER DISPLAY-CCIS	1-116
CENTRALIZED BILLING-CCIS	1-122
CENTRALIZED DAY/NIGHT MODE CHANGE-CCIS	1-137
CENTRALIZED E911-CCIS	1-141
CONSULTATION HOLD-ALL CALLS-CCIS	1-144
DATA LINE SECURITY-CCIS	1-146
DELUXE TRAVELING CLASS MARK-CCIS	1-147
DIAL ACCESS TO ATTENDANT-CCIS	1-151
DIAL MASK FOR TRUNK CALL-CCIS	1-155
DIRECT-IN TERMINATION-CCIS	1-156
DISTINCTIVE RINGING-CCIS	1-160
DO NOT DISTURB-CCIS	1-169
DUAL HOLD-CCIS	1-174

FLEXIBLE NUMBERING OF STATIONS-CCIS	1-175
HOT LINE-CCIS	1-177
HOUSE PHONE-CCIS	1-181
INCOMING CALL IDENTIFICATION-CCIS	1-183
LDN NIGHT CONNECTION-CCIS	1-185
LINK ALARM DISPLAY-CCIS	1-189
LINK RECONNECT-CCIS	1-192
MESSAGE WAITING LAMP SETTING-ATTENDANT-CCIS	1-194
MESSAGE WAITING LAMP SETTING-STATION-CCIS	1-196
MISCELLANEOUS TRUNK ACCESS-CCIS	1-198
MISCELLANEOUS TRUNK RESTRICTION-CCIS	1-199
MULTIPLE CONSOLE OPERATION-CCIS	1-200
NIGHT CONNECTION-FIXED-CCIS	1-205
NIGHT CONNECTION-FLEXIBLE-CCIS	1-206
OUTGOING TRUNK QUEUING-CCIS	1-207
PAGING ACCESS-CCIS	1-209
RESTRICTION FROM OUTGOING CALLS-CCIS	1-222
SINGLE-DIGIT STATION CALLING-CCIS	1-223
STATION-TO-STATION CALLING-CCIS	1-225
TOLL RESTRICTION-3/6 DIGITS-CCIS	1-227
TRUNK ANSWER FROM ANY STATION-CCIS	1-232
TRUNK-TO-TRUNK RESTRICTION-CCIS	1-243
UNIFORM NUMBERING PLAN-CCIS	1-251
VOICE CALL-CCIS	1-253
VOICE MAIL INTEGRATION-CCIS	1-254
VOICE MAIL LIVE RECORD-CCIS	1-256
VOICE MAIL PRIVATE PASSWORD-CCIS	1-260

Chapter 2 Q-SIG FEATURES

SYSTEM OUTLINE	2-2
Summary	2-2
Physical Interface of 24PRT	2-3
Physical Interface of 30PRT	2-3
Interworking with Other Network	2-4
SYSTEM CONFIGURATION	2-5
PRT	2-6
PLO	2-7
SYSTEM CONDITIONS	2-8
Time Slot Allocation for PRT Blade	2-8

SERVICES	2-9
Connected Destination Indication/Calling Party Information Indication	2-9
PRT ASSIGNMENT	2-12
CONNECTED DESTINATION INDICATION /	
CALLING PARTY INFORMATION INDICATION ASSIGNMENT	2-19
CALLED PARTY NUMBER ASSIGNMENT	2-24
Q-SIG FEATURE PROGRAMMING	2-28
OVERLAP SENDING-Q-SIG	2-29
OVERLAP RECEIVING-Q-SIG	2-32

Chapter 3 REMOTE UNIT OVER IP FEATURES

SYSTEM OUTLINE	3-2
SYSTEM CONDITIONS	3-6
SYSTEM SETUP	3-21
PROGRAMMING PROCEDURE	3-23
SETTING A-LAW/ μ -LAW FOR REMOTE UNIT OVER IP	3-26
REMOTE UNIT OVER IP VoIPDB DATA ASSIGNMENT	3-27
REMOTE UNIT OVER IP VLAN DATA ASSIGNMENT	3-29
SURVIVAL MODE ASSIGNMENT	3-30
SETTING SYSTEM DATA COPY	3-31
REMOTE UNIT OVER IP LINK DOWN NOTICE ASSIGNMENT	3-32
TIME ZONE/DAYLIGHT SAVING TIME DATA ASSIGNMENT	3-33
USER MOBILITY ASSIGNMENT	3-35
ISDN ALTERNATIVE ROUTING IN REMOTE UNIT SURVIVAL MODE	3-37
UNIT NUMBER FOR REMOTE UNIT ASSIGNMENT	3-41
SAMPLE SYSTEM CONFIGURATION	3-42
CONDITIONS FOR SAMPLE SYSTEM	3-44
LIST OF COMMANDS	3-45
SETUP THE SYSTEM	3-50
TCP/UDP/RTP PORT NUMBER CONDITIONS	3-51

INTRODUCTION

PURPOSE

This manual explains the programming procedure for providing Common Channel Inter-Office Signaling (CCIS) system, Q-SIG system, and Remote UNIT over IP system to the UNIVERGE SV9300.

OUTLINE OF THIS MANUAL

This manual consists of three chapters. The following paragraphs summarize Chapters 1 through 3.

CHAPTER 1 CCIS FEATURES

This chapter explains the system outline, time slot assignment condition, system specifications, available services with No. 7 CCIS, network structure considerations, programming procedure and inter-office test procedure for CCIS system.

CHAPTER 2 Q-SIG FEATURES

This chapter explains the system outline, system configuration, system conditions and programming procedure for Q-SIG system.

CHAPTER 3 REMOTE UNIT OVER IP FEATURES

This chapter explains the system outline, system conditions, programming procedure and sample setup for Remote UNIT over IP system.

TERMS IN THIS MANUAL

PBX System Designation

PBX system is designated as “PBX” or “system” usually.

When we must draw a clear line between the PBX systems, they are designated as follows.

SV9300 : UNIVERGE SV9300

SV8300 : UNIVERGE SV8300

SV9500 : UNIVERGE SV9500

2400 IPX: NEAX 2400 IPX Internet Protocol eXchange

Attendant Console Name

Attendant Console is usually designated as “Attendant Console”.

When the console type is limited by a service, it is designated as follows:

DESKCON: Desk Console (SN716 DESKCON)

Terminal Name

In this manual, the following terminals are usually designated as each common term unless other type of terminal is specified.

COMMON TERMS			TERMINAL NAMES	
Multiline Terminal	Digital Multiline Terminal		D ^{term}	D ^{term} 85 (Series i)
			DT400 Series	DT410
				DT430
			DT300 Series	DT310
				DT330
	IP Station	IP Multiline Terminal	IP Enabled Digital Multiline Terminal	D ^{term} 85 (Series i) (IP Adapter Type)
			D ^{term} IP INASET	
			D ^{term} IP	D ^{term} 85 (Series i) (IP Bundled Type)
			DT800 Series	DT830/DT830CG/DT830DG
			DT700 Series	DT710
				DT730/DT730CG/DT730DG
				DT750
				DT770G
			Soft Phone	D ^{term} SP30
				SP350
			SIP Wireless Terminal	MH240
IP Single Line Telephone (SIP)		Standard SIP Terminal	Third-party SIP Terminal	

NOTE 1: D^{term}85 (Series i) terminals can be used as the IP terminal by attaching the IP Adapter (IP Enabled Digital Multiline Terminal). This terminal provides users with all features currently available in IP Station.

NOTE 2: DT770G (Cradle Phone) is normally used together with a smart device. The operation and the condition depend on the specifications of application on smart device.

REFERENCE MANUAL

During installation, refer also to the manuals below:

System Manual:

Contains the system description and the programming procedure for the SV9300 System.

Command Manual:

Contains Customer Administration Terminal (CAT) operation, command functions and data required for programming the system.

Programming Manual:

Contains procedure for programming each business, hotel, ISDN and OAI feature.

System Data Programming Manual:

Contains the Customer Specifications Sheets and the System Data Programming Sheets.

System Maintenance Manual:

Contains the system maintenance services and the recommended troubleshooting procedure.

System Hardware Manual:

Contains the installation procedure for the PBX system and the hardware installation procedure for the SV9300 system.

HOW TO READ THIS MANUAL

Chapter 1 through Chapter 3 explains the feature programming for each service about the following items.

PROGRAMMING

This section explains the programming procedure for each service.

The meanings of (1), (2) and marking are as follows.

(1) : 1st data

(2) : 2nd data

◀ : Default; With the system data clear command (CM00, CM01), the data with this marking is automatically set for each command.

RESET

: A reset of the CPU blade is required after data setting.
Press RESET switch on the CPU blade.

OFF LINE

: Command with this marking can be used only under Off-Line mode of the CPU blade. To set Off-Line mode,
(1) Set SENSE switch on the CPU blade to “E” or “F”.
(2) Press RESET switch on the CPU blade.

BLADE RESET

: Commands which require a reset of the blade by CME0 Y=3 after data setting.

PRECAUTIONS

System Data Backup

CAUTION

- If you operate as follows without system data backup after system data setting or service memory setting (registration of the features such as “Call Forwarding” and “Speed Calling [Speed Dialing]” from a station), the data that has been set is invalid.

You must execute the system data backup before the following operations.

- Turning Off the system
- System Reset (reset of CPU blade)
- Changing the CPU blade to Off-Line Mode
- Changing the CPU blade to On-Line Mode after system data setting under Off-Line Mode

In addition, the VRS data backup is also required when any data is recorded or changed in the VRS.

- You can execute the system data backup by the following two ways.
 - Executing the system data backup once a day at the time set by CM43 Y=5>00
(If no data is set, the default setting is 3:00 a.m.)
As the system data backup is performed, the VRS data backup is also performed at the same time.
 - Executing the system data backup from PCPro/CAT by CMEC Y=6>0: 0
- Do not reset the CPU blade while “SYSD” LED on the CPU blade is flashing.

THIS PAGE LEFT BLANK INTENTIONALLY.

CCIS FEATURES

This chapter explains the system outline, time slot assignment condition, system specifications, available services with No. 7 CCIS, network structure considerations, programming procedure and inter-office test procedure for CCIS system.

SYSTEM OUTLINE

This system can be interfaced with a Public Network or Tie Line Network by No. 7 CCIS Signaling.

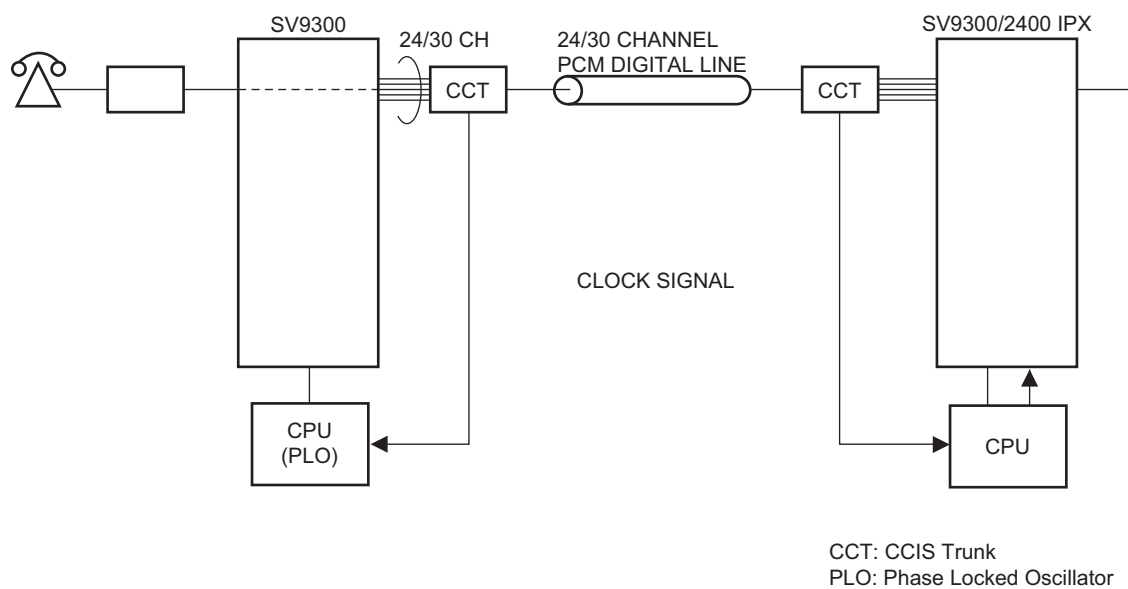
The system is configured with the 24/30 channel CCIS Trunk (CCT) for digital network, a Phase Locked Oscillator (PLO) for digital network synchronization.

The system can provide a variety of inter-office services such as Centralized Billing.

To add the Centralized Billing function, Built-in SMDR of CPU blade is required.

This figure shows the system outline of No. 7 CCIS.

System Outline of No. 7 CCIS



PLO

The Phase Locked Oscillator (PLO) equipped on the CPU blade is responsible to synchronize the system with the clock signals from the another office.

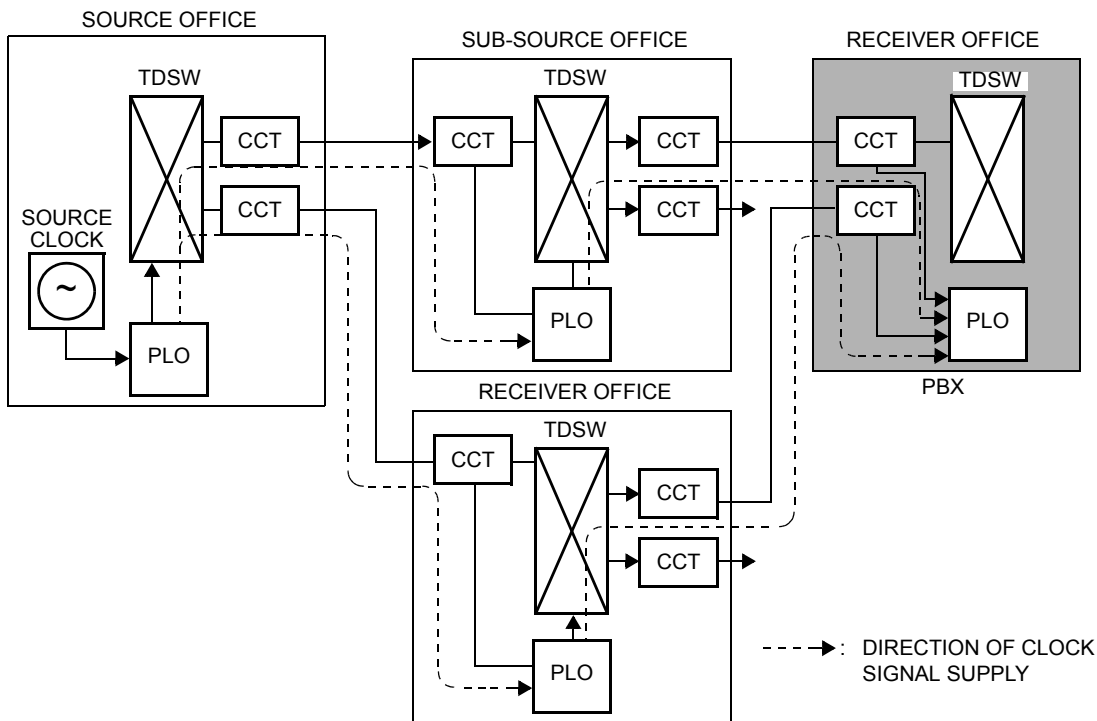
When the PBX is a clock receiver office, the PLO generates the clock signals according to the source clocks received from the source office within the network.

The source clock signals are extracted at CCT blades and supplied to the PLO.

Two clock routes are available: one is the route 0 from the source office, and the other is a standby route 1 from a sub-source office. When no clock signals come from either the route 0 or route 1, due to a transmission line failure, the PLO keeps generating the clock signals at the frequency of the last source clock. The PLO can receive different frequency of source clocks from the route 0 and route 1.

This figure shows an example of clock supply route configuration.

Clock Supply Route



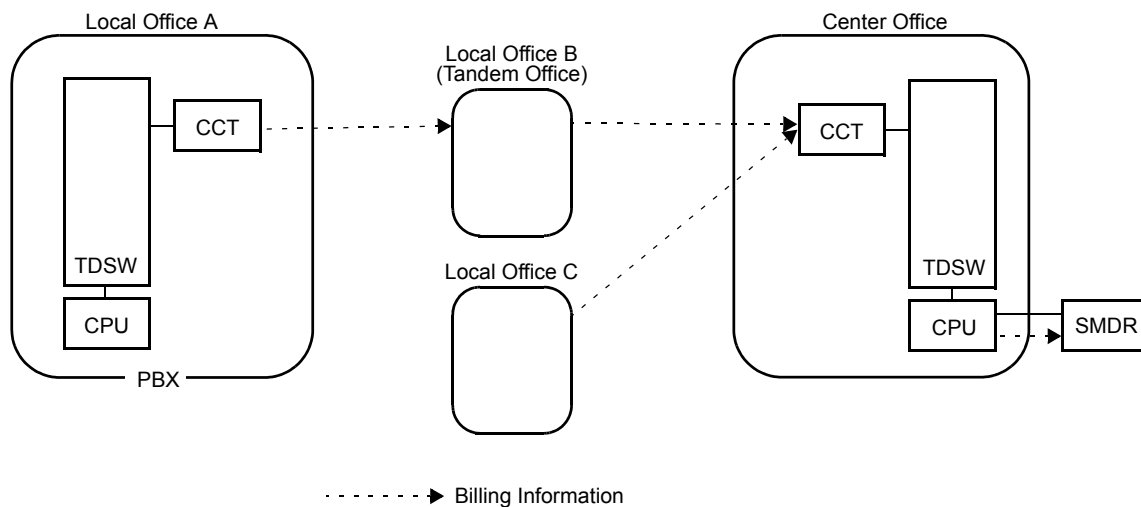
Centralized Billing

Centralized Billing is a function that transmits billing information at each office to the center office within the same network through the common signaling channels of No. 7 CCIS.

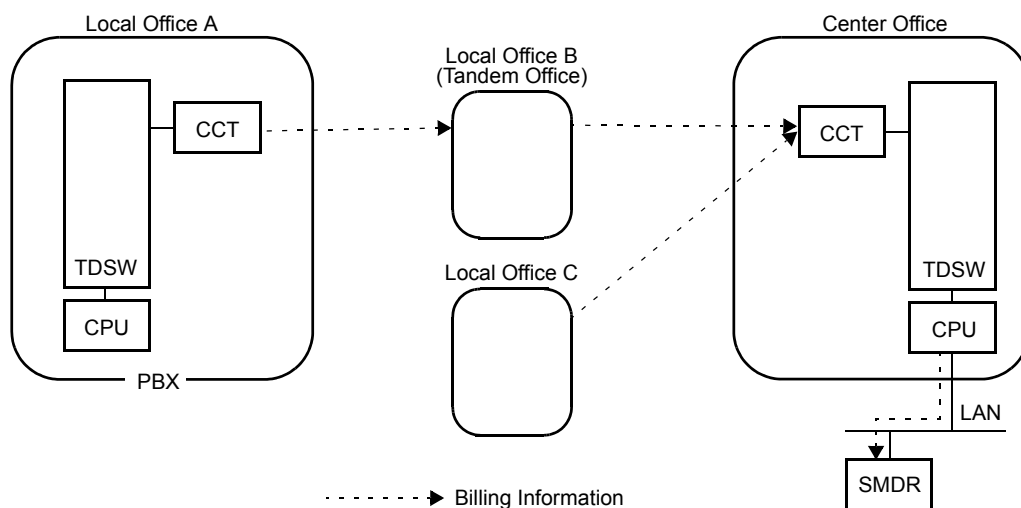
To transmit the own billing information of the local office to center office, or transfer the billing information from other local offices to the center office, SMDR is required for each office. SMDR can be accommodated in the Center Office through LAN connection/RS-232C connection.

The following figure shows the system outline of the Centralized Billing.

System Outline of Centralized Billing (RS-232C connection)



System Outline of Centralized Billing (LAN connection)



Service Conditions for Centralized Billing

If all the PBXs within the network are the SV9300, the PBX can be a center billing office. In this case, there are the following conditions:

Conditions for Center Office;

- When the center office supports extended NEAX 2400 IMS format, the billing information received from each local office can be output with either extended NEAX 2400 IMS format or former NEAX 2400 IMS format.
- Maximum of eight local offices can be accommodated.
- Maximum of 3600 calls per hour can be received from local office. If the number exceeds 3600 calls per hour, the billing information is stored in the local office.

NOTE: *The call records are cleared by the power off or system reset.*

- The billing information stored area (SRAM) from own office (center office) can be designated by the second data of CM04 Y=01>12. And the billing information from local office/tandem office cannot be stored.

NOTE 1: *If the buffer memory on the CPU blade overflows, the oldest billing data is discarded and replaced by the newest one.*

NOTE 2: *When changing the number of storing records by CM04 Y=01>12, be sure to execute the SRAM memory clear by CM00>02/11.*

NOTE 3: *For details of the programming, refer to Station Message Detail Recording (SMDR) of Programming Manual.*

- If the billing information is not sent to the SMDR terminal due to such as a failure of the SMDR terminal, the billing information is stored in center office. Moreover, if the memory is filled, the billing information is stored in the local office.
- Only one SMDR terminal can be connected.

Conditions for Local Office;

- The billing information of local office cannot be sent to the SMDR terminal of the local office.
- If the link between local office and center office is shut down due to such as a failure of center office, the billing information is stored in the local office. In this case, the billing information will be cleared by the CPU reset or power off.
- Maximum of 3600 calls per hour can be sent to center office/tandem office.
- A local office can store up to 12000 calls of billing information of the local office.

Conditions for Tandem Office;

- One center office and maximum of seven local offices can be accommodated.
- Maximum of 3600 calls per hour can be received from local office. If the number exceeds 3600 calls per hour, the billing information is stored in the local office.
- Maximum of 3600 calls per hour can be sent to center office.
- Other conditions are the same as Conditions for Local Office.

Inter-Office Digital Data Transmission through No. 7 CCIS

The PBX can provide Inter-Office Digital Data Transmission through No. 7 CCIS.

When the PBX is an end office in the Inter-Office Digital Data Transmission through No. 7 CCIS, the digital signal is transmitted directly. A maximum of 64 Kbps digital data transmission is available for the direct digital transmission.

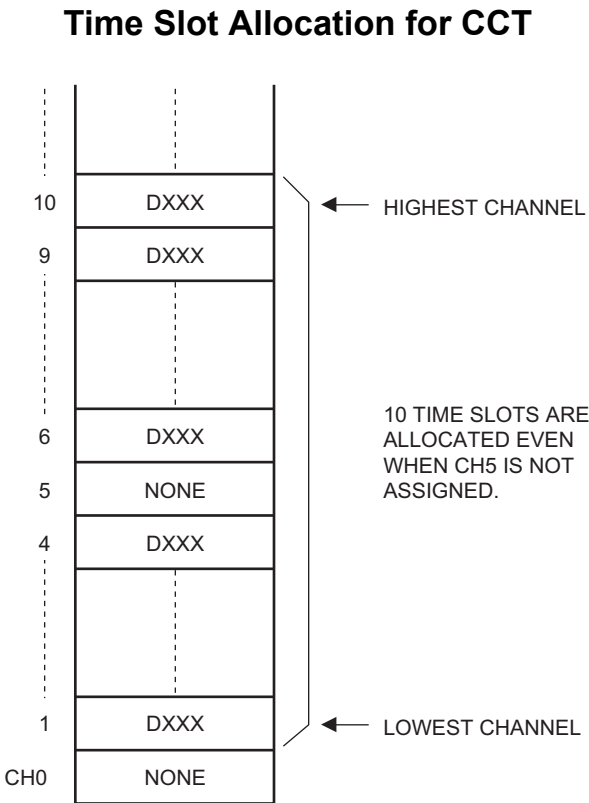
When the PBX is a tandem office in the Inter-Office Digital Data Transmission through No. 7 CCIS, data transparency is provided, and a maximum of 64 Kbps digital data transmission is available.

TIME SLOT ASSIGNMENT CONDITION

Time Slot Allocation for CCT Blade

On each CCT blade, the system recognizes the lowest and highest channel numbers to which trunk numbers are assigned, and allocates time slots to all the channels between them. If trunk numbers are assigned to nonconsecutive channels, the system also allocates time slots to channels not assigned.

For example, as shown below, when Channel 1 through Channel 10 have been assigned by system data programming except Channel 5, the system allocates a total of 10 time slots for all ten channels. Therefore, to avoid allocation of unnecessary time slots, it is recommended that consecutive channels be assigned on each CCT blade.



Number of Time Slots Required for CCT Blade

- (1) When the system is serving as a Lower Hierarchy Office within the network, 1 time slot is allocated for setting up a fixed path between the CCT.
- (2) When the system is serving as a High Hierarchy Office within the network, 1 time slot is allocated to the distant Main Office and distant Local Office for the common signaling channel.

This table shows the number of time slots for the required blade for No. 7 CCIS.

Number of Time Slots Required per CCT Blade (for No. 7 CCIS)

BLADE	NUMBER OF TIME SLOTS PER BLADE	REMARKS
GCD-CCTA	1-25	• Number of CCIS channels + number of trunks assigned
	1-32	

CCT SPECIFICATIONS

Transmission Characteristics

Transmission Characteristics

CHARACTERISTICS	24-CHANNEL	30-CHANNEL
(1) Output		
• Line Rate	1.544 Mbps \pm 50 ppm	2.048 Mbps \pm 50 ppm
• Line Code	AMI with ZCS/B8ZS*	High Density Bipolar 3 (HDB3)
• Line Impedance	100 Ω	75 Ω (Coaxial Cable) 120 Ω (Twisted-Pair Cable)
• Pulse Amplitude (Base to Peak)	3 volts \pm 0.6 volts	2.37 volts nominal (Coaxial Cable) 3 volts nominal (Twisted-Pair Cable)
• Pulse Width	324 ns \pm 30 ns	244 ns nominal
(2) Input		
• Line Rate	1.544 Mbps \pm 200 bps (130 ppm)	2.048 Mbps \pm 50 ppm
• Pulse Amplitude (Base to Peak)	1.5 volts – 3 volts	1.5 volts – 2.7 volts (Coaxial Cable) 1.5 volts – 3.3 volts (Twisted-Pair Cable)
• Frame Synchronization Pattern	100011011100	
• Input Jitter	ITU-T Fig. 1/G743	ITU-T Fig. 1/G743
• Wander	+138UI, –193UI or –138UI, +193UI	ITU-T G823
• Cable Length from PBX to MDF or External Equipment	Maximum 200 m (Maximum 656.2 ft.) [with 0.65 ϕ (22 ABAM) twisted- pair cable]	Maximum 400 m (Maximum 1312.4 ft.) [with 0.65 ϕ (22 ABAM) twisted- pair cable]

* AMI: Alternate Mark Inversion

ZCS: Zero Code Suppression

B8ZS: Bipolar Eight Zero Substitution

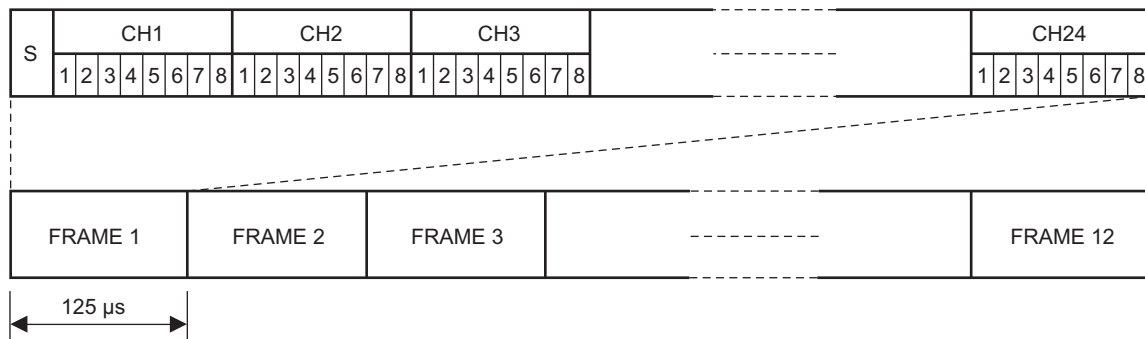
Frame Configuration of 24CCT

According to the AT&T Specifications for 24-channel transmission, there are two types of frame configurations: 12-Multi Frame (D4) and 24-Multi Frame (ESF).

(1) 12-Multi Frame (D4)

The frame has 12-Multi Frames, and each Multi Frame has a 24-channel PCM signal (8 bits/channel) and an S bit (Super Frame Bit). This figure shows the frame configuration, and the table on next page shows frame bit assignment.

Frame Configuration of 24CCT (12-Multi Frame)



S: SUPERFRAME BIT

12-Multi Frame Bit Assignment

FRAME No.	S BIT	
	TERMINAL SYNCHRONIZATION (FT)	SIGNAL SYNCHRONIZATION (FS)
1	1	
2		0
3	0	
4		0
5	1	
6		1
7	0	
8		1
9	1	
10		1
11	0	
12		0

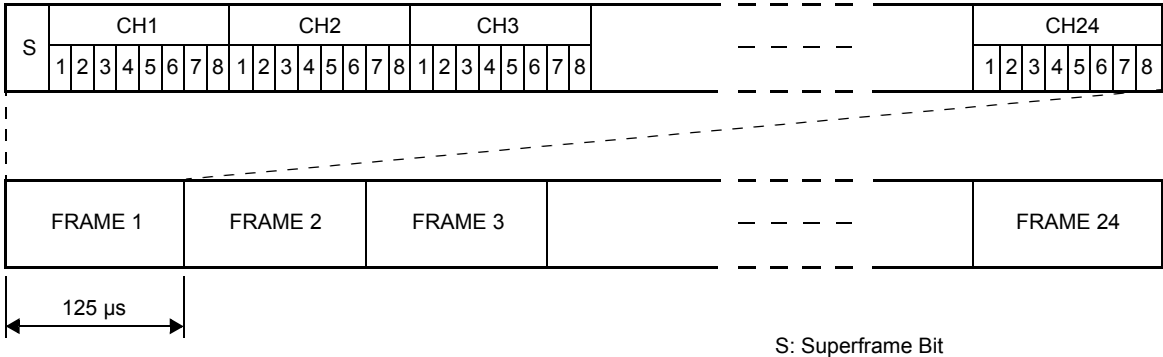
* The S-bit is the first bit in each frame.

* Frames are repeated in the order shown above.

(2) 24-Multi Frame (Extended Super Frame <ESF>)

This frame has 24-Multi Frames and each Multi Frame has a 24-Channel PCM signal (8 bits/channel) and an S bit (Super Frame Bit). This figure shows the frame configuration, and the table on next page shows frame bit assignment.

Frame Configuration of 24CCT (24-Multi Frame)



24-Multi Frame Bit Assignment

FRAME No.	S BIT		
	FRAME SYNCHRONI-ZATION	4 Kbps DATA LINK	CRC
1		m	
2			CB1
3		m	
4	0		
5		m	
6			CB2
7		m	
8	0		
9		m	
10			CB3
11		m	
12	1		
13		m	
14			CB4
15		m	
16	0		
17		m	
18			CB5
19		m	
20	1		
21		m	
22			CB6
23		m	
24	1		

* The S-bit is the first bit in each frame.

* Frames are repeated in the order shown above.

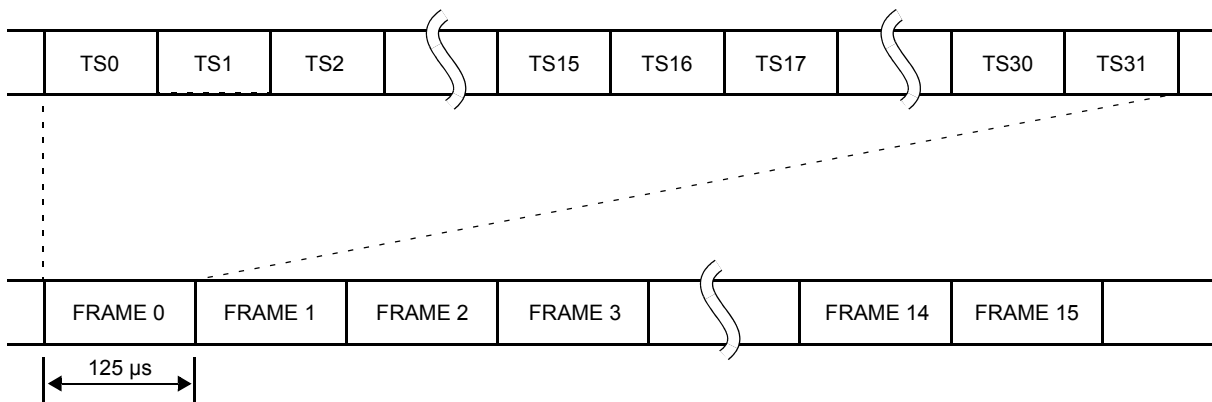
* “m” in the “4 Kbps Data Link” column means that the frame is usually assigned to 1.

Frame Configuration of 30CCT

Based on 30-channel transmission method of ITU-T Specification, the frame configuration consists of 16-Multi Frame, each Multi Frame having 32 time slots.

This figure shows the frame configuration, and the table on next page shows the details of time slot assignment.

Frame Configuration of 30CCT



Time Slot Assignment of 30CCT

TIME SLOT No.	EVEN No. FRAME	ODD No. FRAME
TS0	<p>Frame Alignment Signal (FAS)</p>	
TS1-TS15	Voice Channel CH1-CH15	
TS16	<ul style="list-style-type: none"> No. 7 CCIS: To be used as a Common Signaling Data Channel 	
TS17-TS31	Voice Channel CH17-CH31	

MODEM Specifications

The MODEM specifications required for No. 7 CCIS with Analog Interface are shown below.

- Synchronization : Synchronous
- Data speed : 1200 bps-9600 bps
- Transmission Mode : Full Duplex
- Line : 2/4 wire (Common Signaling Data Link via MODEM)
- Connection Type : Leased
- Interface Condition : ITU-T V24 and V28

SERVICES

List of CCIS Services

SERVICES	REMARKS
Attendant Camp-On with Tone Indication-CCIS	
Attendant Controlled Conference-CCIS	NOTE 1
Automatic Recall-CCIS	
Brokerage-Hot Line-CCIS	
Busy Lamp Field (BLF)-CCIS	NOTE 6
Busy Verification-CCIS	
Call Back-CCIS	NOTE 2
Call Forwarding-All Calls-CCIS	
Call Forwarding-Busy Line-CCIS	
Call Forwarding-No Answer-CCIS	
Call Forwarding-Intercept-CCIS	
Call Forwarding-Override-CCIS	
Call Processing Indication-CCIS	
Call Transfer-All Calls-CCIS	
Call Transfer-Attendant-CCIS	
Called Station Status Display-CCIS	
Calling Name Display-CCIS	
Calling Number Display-CCIS	
CCIS Networking via IP	NOTE 5
Centralized Billing-CCIS	
Centralized Day/Night Mode Change-CCIS	NOTE 3
Centralized E911-CCIS	
Centralized PCPro-CCIS	NOTE 3
Consultation Hold-All Calls-CCIS	
Data Line Security-CCIS	

Continued on next page

List of CCIS Services

SERVICES	REMARKS
Deluxe Traveling Class Mark-CCIS	
Dial Access to Attendant-CCIS	
Dial Mask for Trunk Call-CCIS	
Digital Display-Station-CCIS	
Digital Display-Trunk-CCIS	
Direct-In Termination-CCIS	
Distinctive Ringing-CCIS	
Do Not Disturb-CCIS	
Dual Hold-CCIS	
Elapsed Time Display-CCIS	
Flexible Numbering of Stations-CCIS	
Hands-Free Answerback-CCIS	
Hot Line-CCIS	
House Phone-CCIS	
Incoming Call Identification-CCIS	
Individual Attendant Access-CCIS	NOTE 4
LDN Night Connection-CCIS	
Link Alarm Display-CCIS	
Link Reconnect-CCIS	
Message Waiting Lamp Setting-Attendant-CCIS	NOTE 3
Message Waiting Lamp Setting-Station-CCIS	NOTE 3
Miscellaneous Trunk Access-CCIS	
Miscellaneous Trunk Restriction-CCIS	
Multiple Call Forwarding-All Calls-CCIS	
Multiple Call Forwarding-Busy Line-CCIS	
Multiple Call Forwarding-No Answer-CCIS	
Multiple Console Operation-CCIS	

Continued on next page

List of CCIS Services

SERVICES	REMARKS
Night Connection-Fixed-CCIS	
Night Connection-Flexible-CCIS	
Outgoing Trunk Queuing-CCIS	
Paging Access-CCIS	
Restriction from Outgoing Calls-CCIS	
Service Display-CCIS	
Single-Digit Station Calling-CCIS	
Station-Controlled Conference-CCIS	NOTE 1
Station-to-Station Calling-CCIS	
Station-to-Station Calling-Operator Assistance-CCIS	
Toll Restriction-3/6 Digits-CCIS	
Trunk Answer from Any Station-CCIS	
Trunk-to-Trunk Restriction-CCIS	
Uniform Numbering Plan-CCIS	
Voice Call-CCIS	
Voice Mail Integration-CCIS	
Voice Mail Live Record-CCIS	
Voice Mail Private Password-CCIS	

NOTE 1: *An attendant/extension of the 2400 IPX must be a conference leader.*

NOTE 2: *This service is available by the closed numbering plan.*

NOTE 3: *As a Local Office, this feature is available on the SV9300.*

NOTE 4: *This service is available when the Attendant Console is provided at the 2400 IPX on the network.*

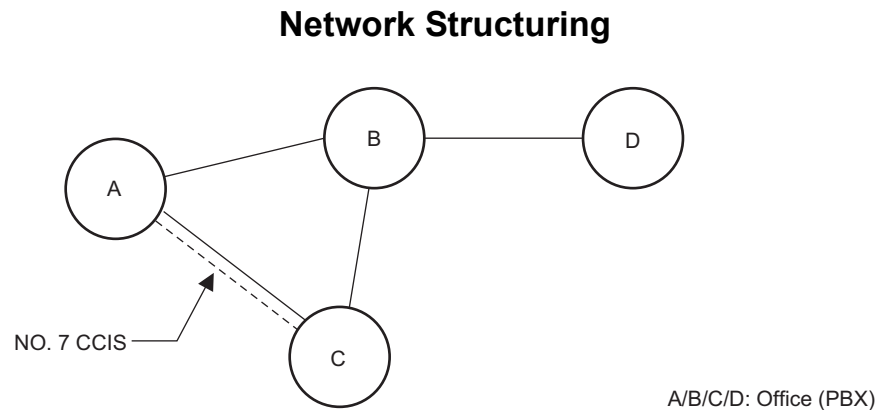
NOTE 5: *Refer to the SV9300 System Manual.*

NOTE 6: *This service is available only for the SV9300 network, not available for the network including the 2400 IPX.*

NETWORK STRUCTURE CONSIDERATIONS

Determining System Configuration

The configuration of the network and the number of lines (channels) should be determined, and is dependent on the traffic between each office (PBX). For example, when the traffic between Office A and Office C is high (as shown in the network of the following figure), Office A and Office C should be connected by No. 7 CCIS directly.



Determining Number of No. 7 CCIS Routes

When the system is a Main Office or a Tandem Office, two or more routes to other offices are required.

- The maximum number of No. 7 CCIS routes is 8 per system.

Determining Type of Transmission Lines

The type of transmission lines available with the PBX is Digital Interface (24CCT/30CCT).

Determining Which PBX Should Be Main Office

When using No. 7 CCIS, the following features require establishing a clear relationship between the Main and Satellite offices:

- Centralized Attendant Service (CAS)

- Centralized Day/Night Mode Change-CCIS

For Centralized Day/Night Mode Change Service, the Main Office must be the 2400 IPX. This feature can be set only from the Main Office 2400 IPX: The SV9300's Attendant Console cannot set this feature. The SV9300 provides the feature when instructed by the Main Office.

- Centralized Billing-CCIS

- Centralized Fault Message

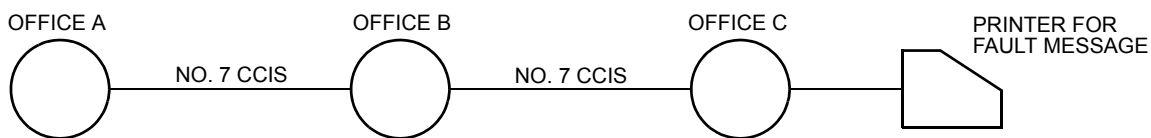
Main office: 2400 IPX only

The SV9300 can pass information, but cannot generate alarm information and send over CCIS.

- Centralized PCPro-CCIS

Main office: 2400 IPX only

For Centralized Fault Message, the SV9300 cannot generate its own fault message. It can only relay a fault message from one office to another office.



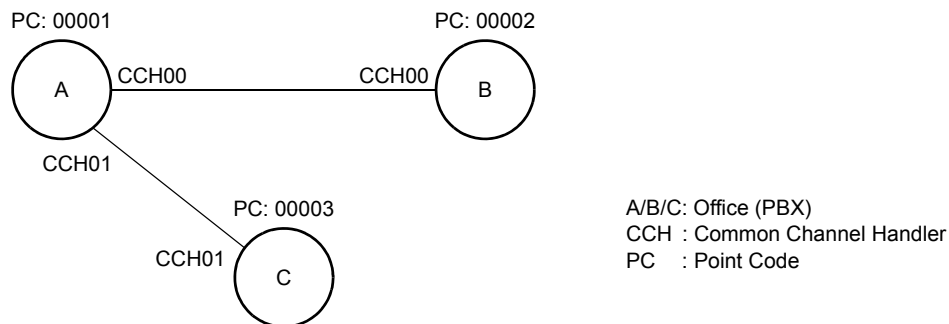
When Office A and Office C are 2400 IPX and Office B is SV9300, a fault message from Office A can be printed out at the printer located in Office C.

Determining Point Code

Point Codes are used to distinguish an originating office and destination office in the No. 7 CCIS network. A Point Code is assigned in each office in the No. 7 CCIS network. The following considerations are required when deciding the Point Code.

- (1) The same Point Code cannot be assigned to more than one office.
- (2) A single Point Code must not be assigned to each CCIS channel in the same system. When a system has two or more CCH, the same Point Code (originating) has to be assigned to all CCH in a system.
- (3) The maximum number of Point Codes is 256. (Only 256 offices can be connected in the same network.)

Example: Point Code Assignment



- Data Assignment of Office A

Command Code	1st Data	2nd Data	Remarks
CMA7 Y=01	00	00001	] Assign the Originating Point Code and the Destination Point Code for CCH00.
CMA7 Y=02	00	00002	
CMA7 Y=01	01	00001	] Assign the Originating Point Code and the Destination Point Code for CCH01.
CMA7 Y=02	01	00003	

- Data Assignment of Office B

Command Code	1st Data	2nd Data	Remarks
CMA7 Y=01	00	00002	] Assign the Originating Point Code and the Destination Point Code for CCH00.
CMA7 Y=02	00	00001	

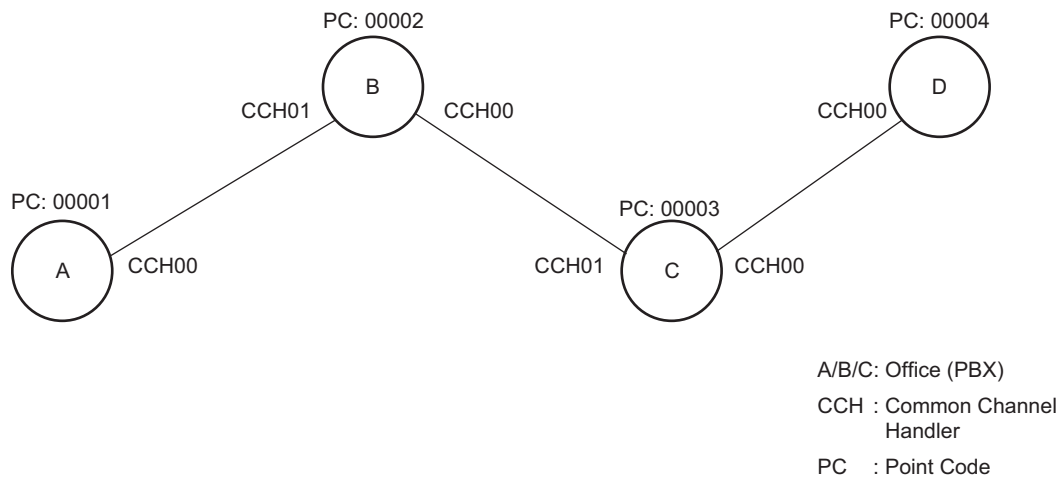
- Data Assignment of Office C

Command Code	1st Data	2nd Data	Remarks
CMA7 Y=01	00	00003	] Assign the Originating Point Code and the Destination Point Code for CCH00.
	00	00001	

Determining CCH Link to Send Messages

Each system CPU must be programmed with the proper information indicating to which CCH (in its own system) every other office in the network is connected. This is required for providing inter-office services such as Call Back, and Busy Verification when using CCIS. In each system, CMA8 is used to inform the local CPU which system is connected through which CCH. This is extremely important, not only for where two switches are connected to each other, but also for networks in which tandem signaling is used.

Example 1:



- Data Assignment of Office A

Command Code	1st Data	2nd Data	Remarks
CMA8	00002	00	Assign the data to make a CCH link with Office B via CCH00.
	00003	00	
	00004	00	

- Data Assignment of Office B

Command Code	1st Data	2nd Data	Remarks
CMA8	00001	01	Assign the data to make a CCH link with Office C via CCH00, and make a CCH link with Office A via CCH01.
	00003	00	
	00004	00	

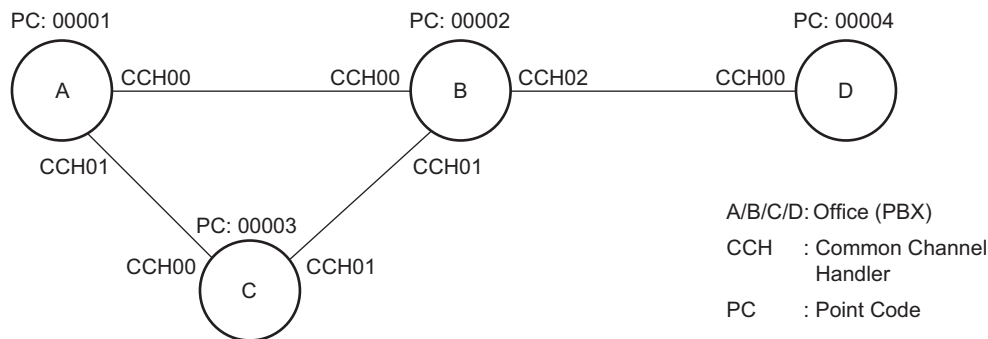
- Data Assignment of Office C

Command Code	1st Data	2nd Data	Remarks
CMA8	00001	01	Assign the data to make a CCH link with Office D via CCH00, and make a CCH link with Office B via CCH01.
	00002	01	
	00004	00	

- Data Assignment of Office D

Command Code	1st Data	2nd Data	Remarks
CMA8	00001	00	Assign the data to make a CCH link with Office C via CCH00.
	00002	00	
	00003	00	

Example 2:



In this example, there are two connection patterns from Office A to Office D, A-B-D and A-C-B-D. Office A's first choice route in the Least-Cost Routing (LCR) Route Pattern Table would be CCH00 (whatever route the voice channel is assigned to).

The second choice would be to the voice route associated with CCH01, which is connected to Office C. At Office C the programming is set up to call and signal Office B, which then routes the call to Office D.

- Data Assignment of Office A

Command Code	1st Data	2nd Data	Remarks
CMA8	00002	00	Assign the data to make a CCH link with Office B via CCH00 and make a CCH link with Office C via CCH01.
	00003	01	
	00004	00	

- Data Assignment of Office B

Command Code	1st Data	2nd Data	Remarks
CMA8	00001	00	Assign the data to make a CCH link with Office A via CCH00 make a CCH link with Office C via CCH01 and make a CCH link with Office D via CCH02.
	00003	01	
	00004	02	

- Data Assignment of Office C

Command Code	1st Data	2nd Data	Remarks
CMA8	00001	00	Assign the data to make a CCH link with Office A via CCH00 and make a CCH link with Office B via CCH01.
	00002	01	
	00004	00	

- Data Assignment of Office D

Command Code	1st Data	2nd Data	Remarks
CMA8	00001	00	Assign the data to make a CCH link with Office B via CCH00.
	00002	00	
	00003	00	

Determining Numbering Plan

The Uniform Numbering Plan is used for the numbering plan in the No. 7 CCIS network. The Uniform Numbering Plan is provided by the Least-Cost Routing (LCR) feature, and there are two types of plans described below.

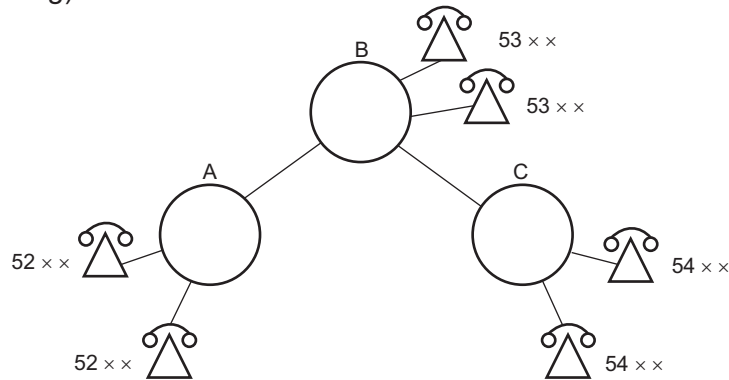
- Station Number (Closed Numbering)
- Office Code and Station Number (Open Numbering)

When an outgoing call is placed through a CCIS link, an originating station number (Office Code and Station Number) and a terminating Station Number are transmitted across the link to the destination office. The originating station number consists of the office number assigned in CMA7 Y=06 and the station number assigned in CM10 Y=00 for the station time slot. The terminating station number consists of the dialed number and the data assigned in CM8A (any LCR changes to the number dialed).

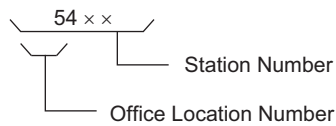
Next page shows an example of the Station Number (Closed Numbering) and Office Code and Station Number (Open Numbering) respectively.

Example of Station Number (Closed Numbering)

Station Numbering
(Closed Numbering):

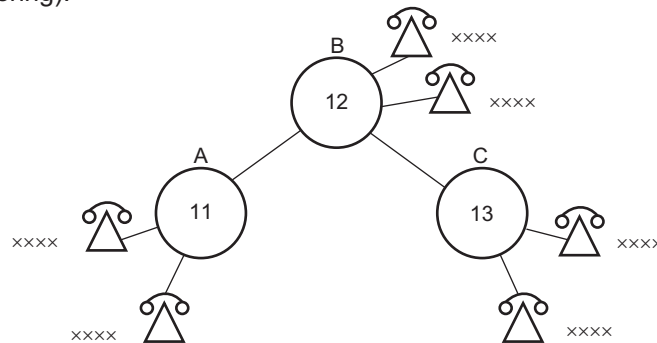


- When originating a call from Office A to Office C

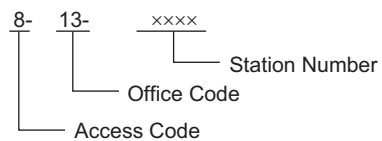


Example of Office Code and Station Number (Open Numbering)

Office Code and Station Number
(Open Numbering):



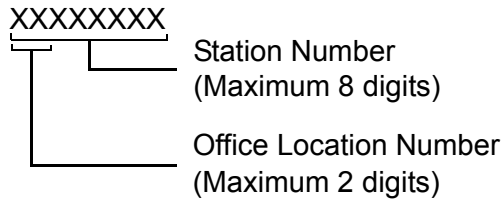
- When originating a call from Office A to Office C



Limitations on developing the Uniform Numbering Plan are as follows:

(1) Station Number (Closed Numbering)

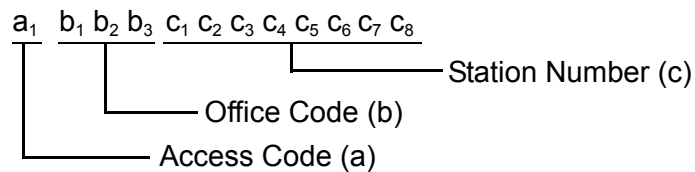
- The dialing number must be formed as follows:



- When providing 3-digit or 4-digit station numbering within the No. 7 CCIS network, the data assignment of the Originating Office Number (CMA7 Y=06) is not necessary because the Originating Office Number is included in the originating station number.
- LCR Group 3 (CM20 Y=0-3: A129) must be used for assigning an LCR access code.

(2) Office Code and Station Number (Open Numbering)

- The dialing number must be formed as follows.

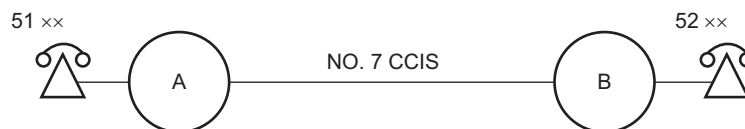


- (a) ≤ 4 digits
- (a) + (b) ≤ 4 digits
- (c) ≤ 8 digits
- a₁ ≠ c₁

- LCR Groups 0-3 (CM20 Y=0-3: A126-A129) can be used for assigning an LCR access code.
- When providing a pseudo dial tone to alter the dialing access code, LCR Groups 0-2 (CM20 Y=0-3: A126-A128) must be used.

Example 1: Station Number (Closed Numbering)

- When the office location number is distinguished by the 1st or 2nd digit of the dialed station number:



- Data Assignment of Office A

Command Code	1st Data	2nd Data	Remarks
CM20 Y=0	51	804	4-digit station
CM20 Y=0	52	A129	LCR Group 3
CM8A Y=A000	3	4005	Area code Development Pattern No. 5
CM8A Y=4005	52	0000	Route Pattern 000
CM8A Y=0000	1	00000	Route 00 access by dialing 52XX
CM8A Y=5000	100	NONE	No digit addition
CM8A Y=5000	153	NONE	No digit deletion
CM10 Y=00	XXXXXX	51XX	Originating station number
CMA7 Y=06	00	NONE	No originating office number
CM85 Y=5	52	04	Maximum number of digits dialed "4"

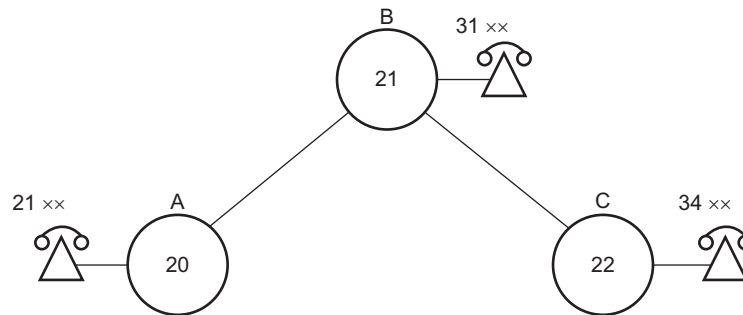
- When the office location number is distinguished by the 3rd digit of the dialed station number:



- Data Assignment of Office A

Command Code	1st Data	2nd Data	Remarks
CM20 Y=0	5	A129	LCR Group 3
CM8A Y=A000	3	4005	Area Code Development Pattern No. 5
CM8A Y=4005	512	8004	4-digit Intra-Office Station
CM8A Y=4005	513	0000	Route Pattern 000
CM8A Y=0000	1	00000	Route 00 access by dialing 52XX
CM8A Y=5000	100	NONE	No digit addition
CM8A Y=5000	153	NONE	No digit deletion
CM10 Y=00	XXXXXX	512X	Originating station number
CMA7 Y=06	00	NONE	No originating office number
CM85 Y=5	513	04	Maximum number of digits dialed "4"

Example 2: Office Code and Station Number (Open Numbering)



Access Code: 8

Office Code : 20 (Office A)
21 (Office B)
22 (Office C)

• Data Assignment of Office A

Pattern 1 (Used when receiving pseudo dial tone after dialing access code.)

Command Code	1st Data	2nd Data	Remarks
CM20 Y=0	8	A126	LCR Group 00
CM8A Y=A000	0	4005	Area Code Development Pattern No. 5
CM8A Y=4005	20	8000	Intra Office Termination
CM8A Y=4005	21	0000	Route Pattern No. 000
CM8A Y=4005	22	0000	Route Pattern No. 000
CM8A Y=0000	1	00000	Route 00 access by dialing 31XX/34XX
CM8A Y=5000	100	00	Digit Addition Pattern No. 00
CM8A Y=5000	153	NONE	No digit deletion
CM8A Y=9000	0	8	Addition of digit "8"
CMA7 Y=06	00	820	Originating office number
CM10 Y=00	XXXXXX	21XX	Originating station number
CM85 Y=5	21	07	Maximum number of digits dialed "7"
	22	07	

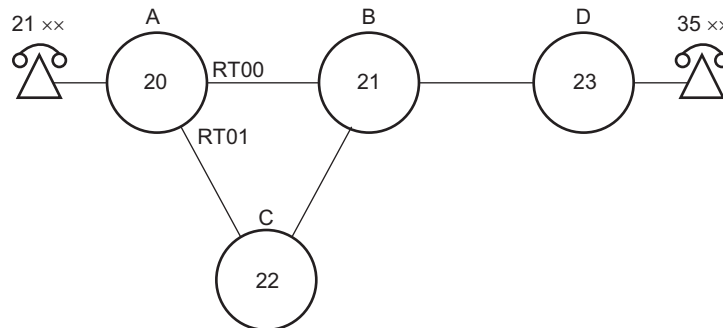
Pattern 2 (Used when not receiving pseudo dial tone.)

Command Code	1st Data	2nd Data	Remarks
CM20 Y=0	8	A129	LCR Group 3
CM8A Y=A000	3	4005	Area Code Development Pattern No. 5
CM8A Y=4005	820	8000	Intra Office Termination
CM8A Y=4005	821	0000	Route Pattern No. 000
CM8A Y=4005	822	0000	Route Pattern No. 000
CM8A Y=0000	1	00000	Route 00 access by dialing 31XX/34XX
CM8A Y=5000	100	NONE	No digit addition
CM8A Y=5000	153	NONE	No digit deletion
CMA7 Y=06	00	820	Originating office number
CM10 Y=00	XXXXXX	21XX	Originating station number
CM85 Y=5	821	07	Maximum number of digits dialed "7"
	822	07	

Determining Route Advance

In a No. 7 CCIS network, the system can automatically route outgoing calls over an alternate facility.

Example 1: When the number of tie line routes is two or more:



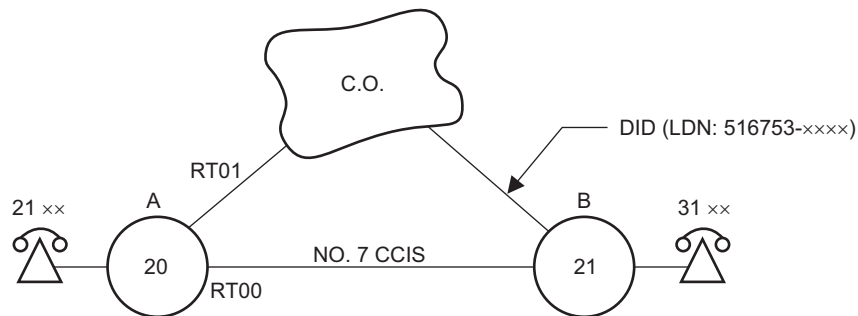
CONDITIONS:

- Office Code and Station Number (Open Numbering)
- Access Code: 8
- Office Code : 20 (Office A)
21 (Office B)
22 (Office C)
23 (Office D)
- Connection Pattern from A to D
1st Choice : A→B→D
2nd Choice : A→C→B→D

Data Assignment of Office A:

Command Code	1st Data	2nd Data	Remarks
CM20 Y=0	8	A129	LCR Group 3
CM8A Y=A000	3	4005	Area Code Development Pattern No. 5
CM8A Y=4005	823	0000	Route Pattern 000
CM8A Y=0000	1	00000	LCR Pattern 000, Route 00
CM8A Y=0000	2	00001	LCR Pattern 000, Route 01
CM8A Y=5000	100	NONE	No digit addition
CM8A Y=5000	153	NONE	No digit deletion
CMA7 Y=06	00	820	Originating office number (to Route 00)
CMA7 Y=06	01	820	Originating office number (to Route 01)
CM10 Y=00	XXXXXX	21XX	Originating station number
CM85 Y=5	823	07	Maximum number of digits dialed "7"

Example 2: When route advance to C.O. is required because the desired tie lines are all busy:



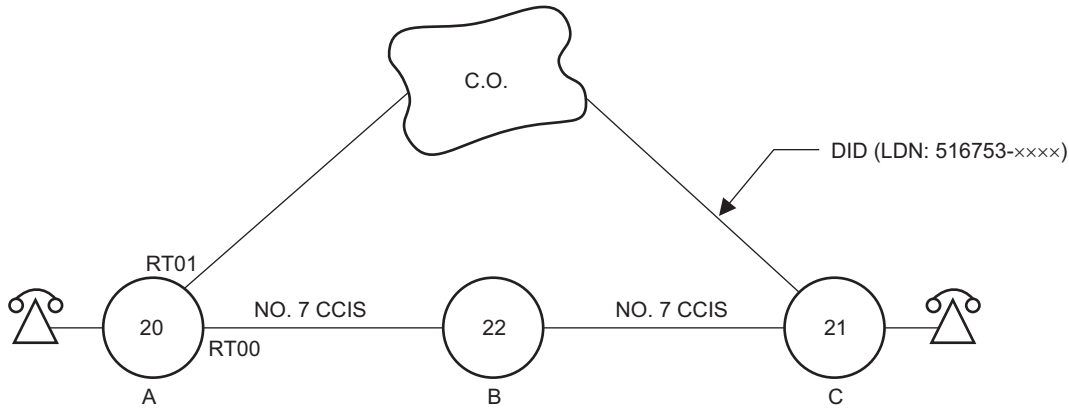
CONDITIONS:

- Office Code and Station Number (Open Numbering)
- Access Code: 8
- Office Code : 20 (Office A)
21 (Office B)
- Connection Pattern from A to B
1st Choice : via No.7 CCIS
2nd Choice : via C.O. line

Data Assignment of Office A:

Command Code	1st Data	2nd Data	Remarks
CM20 Y=0	8	A129	LCR Group 3
CM8A Y=A000	3	4005	Area Code Development Pattern No. 5
CM8A Y=4005	821	0000	Route Pattern 000
CM8A Y=0000	1	00000	LCR Pattern 000, Route 00
CM8A Y=0000	2	00101	LCR Pattern 001, Route 01
CM8A Y=5000	100	NONE	No digit addition
CM8A Y=5000	153	NONE	No digit deletion
CM8A Y=5001	100	00	Digit Addition Pattern No. 00
CM8A Y=5001	153	03	Reading 3 digits deletion
CM8A Y=9000	0	516753	Digit code to be added: 516753
CMA7 Y=06	00	821	Originating office number (to Route 00)
CM10 Y=00	XXXXXX	21XX	Originating station number
CM85 Y=5	821	07	Maximum number of digits dialed "7" (to Route 00)
CM85 Y=5	516753	10	Maximum number of digits dialed "10" (to Route 01)

Example 3: When route advance to one's own office C.O. is required and the tie line route of the tandem office connected through CCIS are all busy:



CONDITIONS:

- Tie Line between A and B: Idle
- Tie Line between B and C: Busy
- The other conditions are same as Example 2.

Data Assignment of Office A:

Command Code	1st Data	2nd Data	Remarks
CM08	372	0	

The other data assignments are the same as Example 2.

Network Construction with 2400 IPX

The Tenant Number and the Trunk Restriction Class are different between the SV9300 and the 2400 IPX as indicated below.

	<u>SV9300</u>	<u>2400 IPX</u>
• Tenant No.	00-63 (CM12 Y=04, CM30 Y=01)	01-255
• Trunk Restriction class	1-8 (CM12 Y=01)	1-15

Based on these differences, care must be taken to insure that proper programming is completed to accommodate the differences between the SV9300 and the 2400 IPX.

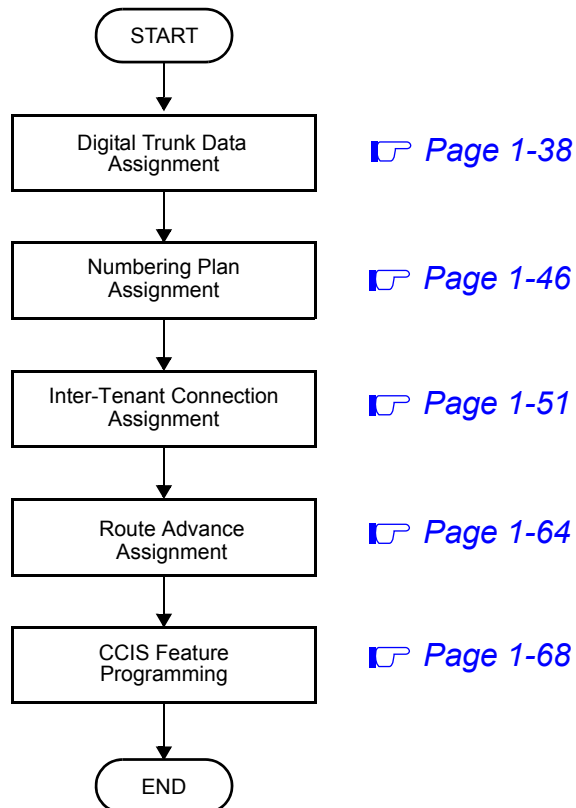
- (1) In the SV9300, station and trunk assignment to tenants must be to a tenant number equal to 01 or higher. (Do not use Tenant 00.)
- (2) For Attendant Console calls, the tenant number transmitted to the destination SV9300 is equal to the Attendant Group (0-3) to which the attendant is assigned in CM60 Y=00. Remember that Tenant 00 is not available in the 2400 IPX, so an Attendant Group of 1-3 must be used.
- (3) For ensuring proper restriction classes throughout the network, programming in the SV9300 allows equating the restriction classes of the SV9300 with the restriction classes available in the 2400 IPX. For details, refer to “DELUXE TRAVELING CLASS MARK-CCIS”. [📄 Page 1-147](#)

When an Attendant Console operator in the SV9300 originates a call through the CCIS network, the SV9300 transmits a restriction class of zero (RSC=0) to the distant office.



CCIS BASIC PROGRAMMING

Program the system data according to the procedures shown below.

Programming Procedure for CCIS



You can see the sample data programming shown below.

- Sample Data Programming for Open Numbering System  [Page 1-54](#)
- Sample Data Programming for Closed Numbering System  [Page 1-59](#)

Digital Trunk Data Assignment

START	DESCRIPTION	DATA
CM05	Assign a Unit number and Slot number to the CCT blade.	<ul style="list-style-type: none"> Y=0 (1) XX ZZ XX: 01-50: Unit No. ZZ : 01-18: Slot No. (2) 42: CCT blade
	Assign the Trunk blade number to the CCT blade.	<ul style="list-style-type: none"> Y=1 (1) XX ZZ XX: 01-50: Unit No. ZZ : 01-18: Slot No. (2) 000-127 : Trunk Blade No. NONE◀: No data
CM10	Assign a trunk number for a common signaling channel and voice channels to the CCT blade.	<ul style="list-style-type: none"> Y=00 (1) XX YY ZZ: Physical Port No. XX: 01-50: Unit No. YY: 01-18: Slot No. ZZ : 01-24: Circuit No. of 24 CCT ZZ : 01-31: Circuit No. of 30 CCT (2) D000-D511: Trunk No.
CM04	Assign the destination to receive the synchronous signal for CCT.	<ul style="list-style-type: none"> Y=10-59 (1) 01: First priority 02: Second priority (2) 01-18 : Slot No. NONE◀: No data
<p>NOTE 1: This data is assigned for the clock synchronization of SV9300 for the opposite office of ISDN network/CCIS/Digital Tie Line. Do not assign this data for ISDN terminals.</p> <p>NOTE 2: The second data must be assigned the Slot number to which each interface blade (PRT/BRT/CCT/DTI) is accommodated (the first data 01 [first priority] is mandatory. Do not assign the first data 02 [second priority] only).</p> <p>NOTE 3: The connection to a SIP conversion adapter with BRT/PRT blade depends on whether the adapter can supply the clock or not. Do not assign this data for the BRT/PRT blade when the clock cannot be supplied.</p>		
A		

A

CMAA

DESCRIPTION

Assign the necessary functions to each CCT.

NOTE 1: *This command is only applicable for the 24CCT.*

NOTE 2: *The following table shows the relationship between CMAA Y=01 and Y=02.*

CMAA Y=01 (FRAME CONFIGURATION)	CMAA Y=02 (ZERO CODE SUPPRESSION)	SIGNALING
24-Multi Frame [1]	Not available [1] Available [0]	B8ZS
12-Multi Frame [0]		Transparent
		B7

[] indicates 2nd Data

DATA

- Y=00 Data Mode **NOTE 1, NOTE 2**

- 000-127: Trunk Blade No. assigned by CM05 Y=1
- 1: Based on AT&T Specifications

- Y=02 Zero Code Suppression [B7]

NOTE 1, NOTE 2

BLADE RESET

- 000-127: Trunk Blade No. assigned by CM05 Y=1
- 0 : Available (Non Transparent)
1◀: Not available (Transparent)

- Y=19 Selection of cable length for CCT

BLADE RESET

- 000-127: Trunk Blade No. assigned by CM05 Y=1
- 0 : 0-40 m (0-131.2 ft.)
1 : 41-81 m (134.5-265.7 ft.)
2 : 82-122 m (269-400.2 ft.)
3 : 123-162 m (400.4-531.4 ft.)
4 : 163-200 m (534.8-656 ft.)
7◀: 0-40 m (0-131.2 ft.)

- Y=20 Short/Long mode setting of cable (CCT)

- 000-127: Trunk Blade No. assigned by CM05 Y=1
- 0 : Short distance
1◀: Long distance

B

B	DESCRIPTION	DATA
CMAA		<ul style="list-style-type: none"> Y=21 Receiving pulse level (CCT)
		BLADE RESET
		(1) 000-127: Trunk Blade No. assigned by CM05 Y=1
		(2) 00 : 0.91/1.70 V
		01 : 1.74/0.84 V
		02 : 0.59/0.84 V
		03 : 0.42/0.45 V
		04 : 0.32/0.45 V
		05 : 0.21/0.20 V
		06 : 0.16/0.10 V
		07 : 0.10/not defined
		15◀: 0.91/1.70 V
CM30	Assign a trunk route number to the CCT.	<ul style="list-style-type: none"> Y=00
	BLADE RESET	(1) 000-511: Trunk No. assigned by CM10 Y=00
		(2) 00-63: Trunk Route No.
	<p>NOTE 1: The trunk routes used for a common signaling channel must be different from the trunk routes used for voice channels.</p> <p>NOTE 2: If channel number 16 is assigned as Common Signaling channel, all channels in the CCT must be assigned as No. 7 CCIS trunk.</p> <p>NOTE 3: The CCT route must be separated from any analog trunk route.</p>	
C		

C	DESCRIPTION	DATA
CM35	Assign the trunk route data for common signaling channel and voice channels. Minimum of two routes.	<ul style="list-style-type: none"> Y=000 (1) 00-63: Trunk Route No. (2) 04: Tie Line
		<ul style="list-style-type: none"> Y=001 (1) 00-63: Trunk Route No. (2) 7◀: DP/DTMF <div>BLADE RESET</div>
		<ul style="list-style-type: none"> Y=004 (1) 00-63: Trunk Route No. (2) 2: Answer Signal arrives
		<ul style="list-style-type: none"> Y=005 (1) 00-63: Trunk Route No. (2) 1◀: Release Signal arrives
	Specify the incoming connection signal.	<ul style="list-style-type: none"> Y=009 (1) 00-63: Trunk Route No. (2) 03: Wink Start/CCIS <div>BLADE RESET</div>
	Specify the outgoing start condition.	<ul style="list-style-type: none"> Y=020 (1) 00-63: Trunk Route No. (2) 00: Wink Start/CCIS <div>BLADE RESET</div>
	Specify the trunk seizure sequence for voice channel route.	<ul style="list-style-type: none"> Y=083 (1) 00-63: Trunk Route No. (2) 0 : As per CM08>078 1◀: By allotter
CM08	Specify the trunk seizure sequence when CM35 Y=083 is set to 0.	<ul style="list-style-type: none"> (1) 078 (2) 0 : Highest available trunk 1◀: Lowest available trunk
D		

D	DESCRIPTION	DATA
CM35	Provide the cyclic redundancy checking for 30CCT.	<ul style="list-style-type: none"> Y=089 <div>BLADE RESET</div> <ol style="list-style-type: none"> 00-63: D channel Trunk Route No. 0 : To provide 1◀: Not provided
CM08	Provide the common signaling channel and voice channel routes with No. 7 CCIS facilities.	<ul style="list-style-type: none"> Y=090 <ol style="list-style-type: none"> 00-63: D channel Trunk Route No. 0: No. 7 CCIS
CM35	Assign a CCH number to each common signaling channel and voice channel route.	<ul style="list-style-type: none"> Y=091 <ol style="list-style-type: none"> 00-63: Trunk Route No. 00-63: CCH No.
	Assign the kind of CCIS trunk (T1) to each common signaling channel and voice channel route.	<ul style="list-style-type: none"> Y=100 <ol style="list-style-type: none"> 00-63: Trunk Route No. 11 : CCIS Trunk (T1) NONE◀: No data
CM30	Assign a Circuit Identification Code (CIC) to each trunk number used for voice channel.	<ul style="list-style-type: none"> Y=35 <ol style="list-style-type: none"> 000-511: Trunk No. 001-127: CIC
E	<div>RESET</div> <p>NOTE: The Circuit Identification Code (CIC) represents a circuit number to designate a trunk (of each trunk route) used as a voice channel in the No. 7 CCIS network. A CIC should not be assigned to a trunk used as a Common Signaling Channel.</p>	

E	DESCRIPTION	DATA
CMA7	Assign the trunk number to be used as the common signaling channel.	<ul style="list-style-type: none"> Y=00 (1) 00-63: CCH No. (2) 000-511: Trunk No. assigned by CM10
	Assign an Originating Point Code (OPC) to each CCH number.	<ul style="list-style-type: none"> Y=01 (1) 00-63: CCH No. (2) 00001-16367: Originating Point Code
	RESET	
	NOTE: <i>The Originating Point Code is used to designate an originating office in the No. 7 CCIS network. A single OPC should be assigned to all CCH numbers provided in the same system.</i>	
	Assign a Destination Point Code (DPC) to each CCH number.	<ul style="list-style-type: none"> Y=02 (1) 00-63: CCH No. (2) 00001-16367: DPC
	NOTE: <i>The Destination Point Code is used to designate a terminating office in the No. 7 CCIS network. Usually a different DPC is assigned to each CCH number in the same system.</i>	
F	Assign the Point Code of the Centralized Fault Reporting office, if required.	<ul style="list-style-type: none"> Y=05 (1) 00-63: CCH No. (2) 00001-16367: Point Code of Centralized Fault Reporting office
	Assign the originating office number to each CCH number, if required.	<ul style="list-style-type: none"> Y=06 (1) 00-63: CCH No. (2) 0000-9999: Originating Office No.
	NOTE: <i>This data setting is required only for open numbering system.</i>	

	DESCRIPTION	DATA
F		
CMA7	Assign the Baud rate for the Common Signaling Channel.	<ul style="list-style-type: none"> Y=81 (1) 00-63: CCH No. (2) 0 : 64 Kbps 1 : 56 Kbps 2 : 48 Kbps (1) 3 : 48 Kbps (2) 7◀: 64 Kbps
CMA8	Assign the CCH number to which a signaling message is transferred according to the Destination Point Code (DPC) received. Up to 256 point codes can be assigned.	<ul style="list-style-type: none"> Y=0 (1) 00001-16367: DPC (2) 00-63: CCH No.
CMAA	Specify the type of the CCT blade.	<ul style="list-style-type: none"> Y=15 (1) 000-127: Trunk Blade No. by CM05 Y=1 (2) 0 : E1 (2 Mbps) 1◀: T1 (1.5 Mbps)
END		

- When the setting of more than 17 Highway Channels is required for a CCT blade, reassignment of the Highway Channel (111 ch) allocation is required to each physical slot (slot01-06/07-12/13-18). The programming for Highway Channel reassignment is as follows. For the details of Highway Channel reassignment, refer to “CMF7 Y=9” in Command Manual.

START	DESCRIPTION	DATA
CMF7	Reassign Highway Channel to the slot accommodated the CCT blade.	<ul style="list-style-type: none"> Y=9 (1) XX YY XX: 01-50: Unit No. YY: 01/07/13: Lowest Slot No. in each Line/Trunk chassis (2U) (2) XX YY XX: 01-50: Unit No. YY: 06/12/18: Highest Slot No. in each Line/Trunk chassis (2U)
CME0	Execute the blade reset to all slots of the Unit accommodated the CCT blade.	<ul style="list-style-type: none"> Y=3 (1) XX YY XX: 01-50: Unit No. YY: 01-18: Slot No. (2) XX YY XX: 01-50: Unit No. YY: 01-18: Slot No.
END		

- To execute Loopback for CCT, do the following data programming.

START	DESCRIPTION	DATA
CMAA	Execute Loopback for CCT.	<ul style="list-style-type: none"> Y=24 Loopback setting (1) 000-127: Trunk Blade No. assigned by CM05 Y=1 (2) 00 : Local Loopback 01 : Payload Loopback 15◀: Loopback OFF
END		

Numbering Plan Assignment

- For open numbering system

START	DESCRIPTION	DATA
CM20	Assign the access code for LCR Group 0-3. NOTE: <i>When providing Attendant Camp-On with Tone Indication-CCIS, be sure to set the second data to A129 (LCR Group 3).</i>	<ul style="list-style-type: none"> • Y=0-3 Numbering Plan Group 0-3 <ol style="list-style-type: none"> (1) X-XXXX: Access Code (2) A126: LCR Group 0 A127: LCR Group 1 A128: LCR Group 2 A129: LCR Group 3
CM8A	Assign an Area Code Development Pattern number to each LCR Group. Assign a Route Pattern number to the digits to be dialed in the Area Code Development Pattern number assigned by CM8A Y=A000. Assign an area code for intra-office termination, if required. Assign the next Route Pattern number to the Route Pattern number assigned CM8A Y=4005-4007. NOTE: <i>This data is required to expand the order of LCR selection that is assigned by CM8A Y=0000-0255. The order of LCR selection can be expand to the maximum seventh.</i>	<ul style="list-style-type: none"> • Y=A000 <ol style="list-style-type: none"> (1) 0-3: LCR Group 0-3 (2) 4005-4007: Area Code Development pattern No. 5-7 <ul style="list-style-type: none"> • Y=4005-4007 Area Code Development Pattern No. 5-7 <ol style="list-style-type: none"> (1) X-X---X: Area Code 1-8 digits (2) 0000-0255: Route Pattern No. 000-255 <ul style="list-style-type: none"> • Y=4005-4007 Area Code Development Pattern No. 5-7 <ol style="list-style-type: none"> (1) X-X---X: Area Code 1-8 digits (2) 8000: Intra-Office Termination <ul style="list-style-type: none"> • Y=0000-0255 Route Pattern No. 000-255 <ol style="list-style-type: none"> (1) 0: Designation of next table (2) 0000-0255: Next Route Pattern No. 000-255
A		

A	DESCRIPTION	DATA
CM8A	Specify the order LCR selection for the Route Pattern number assigned by CM8A Y=4005-4007.	<ul style="list-style-type: none"> Y=0000-0255 Route Pattern No. 000-255 (1) 1: 1st 2: 2nd 3: 3rd 4: 4th (2) XXX ZZ XXX: 000-255: LCR Pattern No. ZZ : 00-63: Trunk Route No.
	For area code deletion, designate the digits to be deleted.	<ul style="list-style-type: none"> Y=5000-5255 LCR Pattern No. 000-255 (1) 153: Number of digit to be deleted (2) 00 : No digit deletion 01-10 : First 1-10 digits deletion NONE◀: No digit deletion
	When sharing LCR Pattern number and LCR Pattern number for alternative routing (To allow maximum 255 alternative routing offices), specify to assign area code addition by CM8A Y=5000-5255>178.	<ul style="list-style-type: none"> Y=5000-5255 LCR Pattern No. 000-255 (1) 177: Sharing LCR Pattern No. for alternative routing (2) 0 : Assigned by CM8A Y=5000-5255>178 1◀: Assigned by CM8A Y=5000-5255>100
	For area code addition, designate the digits to be added when CM8A Y=5000-5255>177 2nd data is 1.	<ul style="list-style-type: none"> Y=5000-5255 LCR Pattern No. 000-255 (1) 100: Designation of Digit Addition Pattern No. (2) 9000-9255: Digit Addition Pattern No. 000-255 NONE◀ : No digit addition
B		

	DESCRIPTION	DATA
<div>B</div> <div>CM8A</div>	For area code addition, designate the digits to be added when CM8A Y=5000-5255>177 2nd data is 0.	<ul style="list-style-type: none"> Y=5000-5255 LCR Pattern No. 000-255 (1) 178: Designation of Digit Addition Pattern No. (2) 9000-9255: Digit Addition Pattern No. 000-255 NONE◀ : No digit addition
<div>CM08</div>	Specify the maximum number of dialed digits sent to the CCIS network.	<ul style="list-style-type: none"> (1) 379 (2) 0 : 15 digits 1◀: 24 digits
<div>CM85</div>	Specify the maximum number of sending digits dialed by the calling party. The maximum number of sending digits (including the area codes) should be assigned to each area code.	<ul style="list-style-type: none"> Y=0-7 Area Code Development Pattern No. 0-7 assigned by CM8A Y=A000 (1) X-X---X: Area Code dialed 1-8 digits (2) 01-24◀: 1-24 digits 25-79 : 25-79 digits
END		

- For closed numbering system

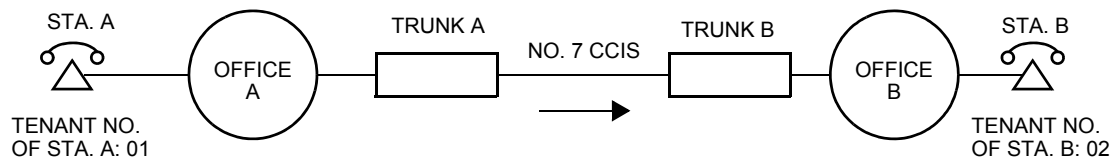
START	DESCRIPTION	DATA
CM20	Assign the access code for LCR Group 3.	<ul style="list-style-type: none"> • Y=0-3 Numbering Plan Group 0-3 (1) X-XXXX: Access Code (2) A129: LCR Group 3
CM8A	Assign an Area Code Development Pattern number to the LCR Group selected above.	<ul style="list-style-type: none"> • Y=A000 (1) 0-3: LCR Group 3 (2) 4005-4007: Area Code Development Pattern No. 5-7
	Assign a Route Pattern number to the digits to be dialed in the Area Code Development Pattern number assigned by CM8A Y=A000.	<ul style="list-style-type: none"> • Y=4005-4007 Area Code Development pattern No. 5-7 (1) X-X---X: Area Code 1-8 digits (2) 0000-0255: Route Pattern No. 000-255
	<p>NOTE: <i>The digits assigned in CM20 to A129: LCR Group 3 must be entered in the Area Code Development Pattern table for access to the desired Route Pattern number.</i></p>	
	Assign an area code (station number) for intra-office station, if required.	<ul style="list-style-type: none"> • Y=4005-4007 Area Code Development Pattern No. 5-7 (1) X-X---X: Area Code 1-8 digits (2) 8001-8008: 1-8 digits Intra-Office Station
	Specify the LCR selection priority for the Route Pattern number assigned by CM8A Y=4005-4007.	<ul style="list-style-type: none"> • Y=0000-0255 Route Pattern No. 000-255 (1) 1: 1st priority 2: 2nd priority 3: 3rd priority 4: 4th priority (2) XXX ZZ XXX: 000-255: LCR Pattern No. ZZ : 00-63: Trunk Route No.
	For area code deletion, designate the digits to be deleted.	<ul style="list-style-type: none"> • Y=5000-5255 LCR Pattern No. 000-255 (1) 153: Number of digit to be deleted (2) 00 : No digit deletion 01-10 : First 1-8 digits deletion NONE◀: No digit deletion
A		

A	DESCRIPTION	DATA
CM8A	<p>When sharing LCR Pattern number and LCR Pattern number for alternative routing (To allow maximum 255 alternative routing offices), specify to assign area code addition by CM8A Y=5000-5255>178.</p> <p>For area code addition, designate the digits to be added when CM8A Y=5000-5255>177 2nd data is 1.</p> <p>For area code addition, designate the digits to be added when CM8A Y=5000-5255>177 2nd data is 0.</p>	<ul style="list-style-type: none"> Y=5000-5255 LCR Pattern No. 000-255 (1) 177: Sharing LCR Pattern No. for alternative routing (2) 0 : Assigned by CM8A Y=5000-5255>178 1◀: Assigned by CM8A Y=5000-5255>100 <ul style="list-style-type: none"> Y=5000-5255 LCR Pattern No. 000-255 (1) 100: Designation of Digit Addition Pattern No. (2) 9000-9255: Digit Addition Pattern No. 000-255 NONE◀ : No digit addition <ul style="list-style-type: none"> Y=5000-5255 LCR Pattern No. 000-255 (1) 178: Designation of Digit Addition Pattern No. (2) 9000-9255: Digit Addition Pattern No. 000-255 NONE◀ : No digit addition <ul style="list-style-type: none"> Y=9000-9255 Digit Addition Pattern No. 000-255 (1) 0: Entry of digit code to be added (2) X-X---X: Digits to be added (Maximum 32 digits)
CM08	Specify the maximum number of dialed digits sent to the CCIS network.	<ul style="list-style-type: none"> (1) 379 (2) 0 : 15 digits 1◀: 24 digits
CM85	Specify the maximum number of sending digits dialed by the calling party. The maximum number of sending digits (including the area codes) should be assigned to each area code.	<ul style="list-style-type: none"> Y=0-7 Area Code Development Pattern No. 0-7 assigned by CM8A Y=A000 (1) X-X---X: Area Code dialed 1-8 digits (2) 01-24◀: 1-24 digits 25-79 : 25-79 digits
END		

Inter-Tenant Connection Assignment

START	DESCRIPTION	DATA
CM12	Assign the tenant number to each station. NOTE: <i>When linking with the 2400 IPX, the tenant number for the SV9300 should be assigned as 01-63. 00 is not used.</i>	<ul style="list-style-type: none"> Y=04 (1) X-XXXXXXXX: Station No. (2) 00-63: Tenant No. 00-63 01◀ : Tenant No. 01
CM30	Assign the tenant number to each trunk. NOTE: <i>When linking with the 2400 IPX, the tenant number for the SV9300 should be assigned as 01-63. 00 is not used.</i>	<ul style="list-style-type: none"> Y=01 (1) 000-511: Trunk No. (2) 00-63: Tenant No. 00-63 01◀ : Tenant No. 01
CM63	Specify the inter-tenant connection for station-to-station calling or incoming call termination. (See Example 1, 2 in the following pages.)	<ul style="list-style-type: none"> Y=1 Station-to-Station Calling (1) XX ZZ XX: 00-63: Tenant No. of Calling Station ZZ : 00-63: Tenant No. of Called Station (2) 0 : Restricted 1◀: Allow <ul style="list-style-type: none"> Y=2 Incoming Call Termination (1) XX ZZ XX: 00-63: Tenant No. of Called Station ZZ : 00-63: Tenant No. of Trunk (2) 0 : Restricted 1◀: Allow
END		

Example 1: Inter-Tenant Connection for Station-to-Station Calling

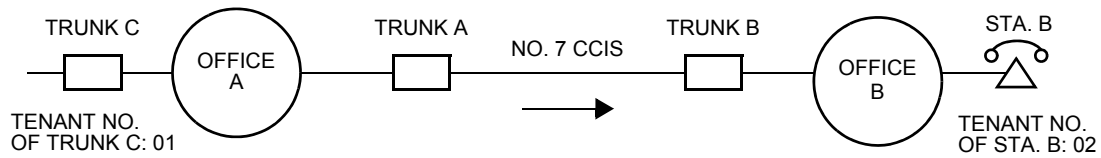


For the inter-tenant connection between Station A and Station B, the data assignment at Office B is as follows.

Command Code	1st Data	2nd Data
CM63 Y=1	01 02 01: Tenant No. of Calling Station (Station A) 02: Tenant No. of Called Station (Station B)	1◀: Allow

NOTE: *The inter-tenant restriction between Trunk B and Station B (CM63 Y=2) is ineffective.*

Example 2: Inter-Tenant Connection for Incoming Call Termination



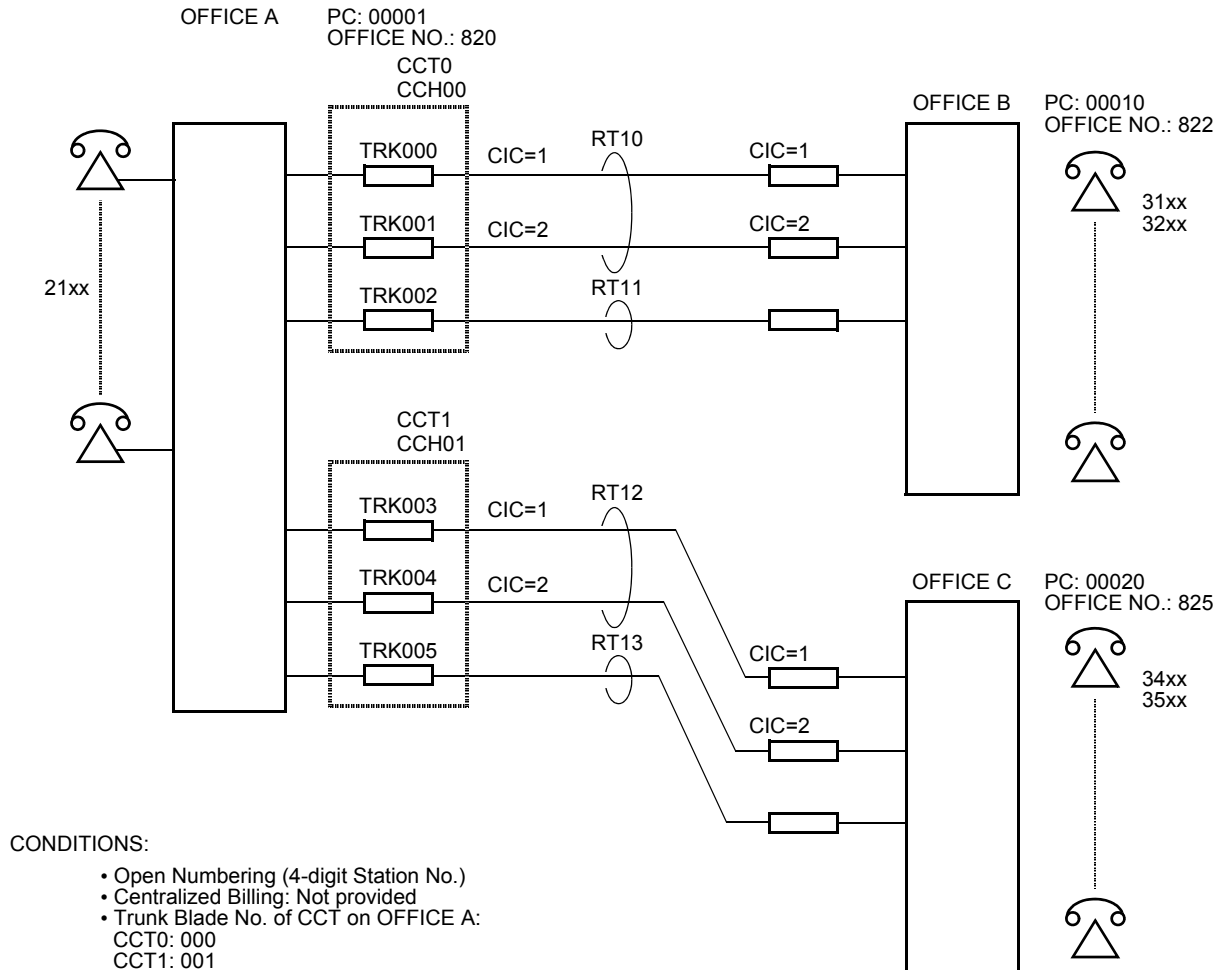
For the inter-tenant connection between Trunk C (Office A) and Station B (Office B), the data assignment at Office B is as follows.

Command Code	1st Data	2nd Data
CM63 Y=2	01 02 01: Tenant No. of Called Station (Station B) 02: Tenant No. of Trunk (Trunk C)	1◀: Allow

NOTE: *The inter-tenant restriction between Trunk B and Station B (CM63 Y=2) is ineffective.*

Sample Data Programming for Open Numbering System

EXAMPLE



For office A, the following programming is required:

- (1) Assign the CCT blade.

<u>Command Code</u>	<u>1st Data</u>	<u>2nd Data</u>	
05 Y=0	010101	42	: CCT0
	010201	42	: CCT1
05 Y=1	010101	000	: Trunk Blade No. 000
	010201	001	: Trunk Blade No. 001

- (2) Assign the CCT blade parameters.
(These data assignments are only for 24CCT.)

<u>Command Code</u>	<u>1st Data</u>	<u>2nd Data</u>
AA Y=00	000	0
	001	0
AA Y=01	000	0/1
	001	0/1
AA Y=02	000	0
	001	0

- (3) Assign a trunk route number to the CCT trunks.

<u>Command Code</u>	<u>1st Data</u>	<u>2nd Data</u>	
30 Y=00	000	10	] : RT10
	001	10	
	002	11	
	003	12	] : RT12
	004	12	
	005	13	
			: RT13

(4) Assign the trunk route data.

<u>Command Code</u>	<u>1st Data</u>	<u>2nd Data</u>		
35 Y=000	10	04]	Tie Line route assignment
	11	04		
	12	04		
	13	04		
35 Y=001	10	7]	Dialing signal type
	11	7		
	12	7		
	13	7		
35 Y=004	10	2]	Answer Signal
	11	2		
	12	2		
	13	2		
35 Y=005	10	1]	Release Signal
	11	1		
	12	1		
	13	1		
35 Y=009	10	03]	Incoming connection signal
	11	03		
	12	03		
	13	03		
35 Y=020	10	00]	Sender start condition
	11	00		
	12	00		
	13	00		
35 Y=090	10	0]	No. 7 CCIS facilities assignment
	11	0		
	12	0		
	13	0		

(5) Assign the CCH to each route.

<u>Command Code</u>	<u>1st Data</u>	<u>2nd Data</u>		
35 Y=091	10	00	]	: CCH 00
	11	00		
	12	01	]	: CCH 01
	13	01		

(6) Assign a CIC to each voice channel trunk.

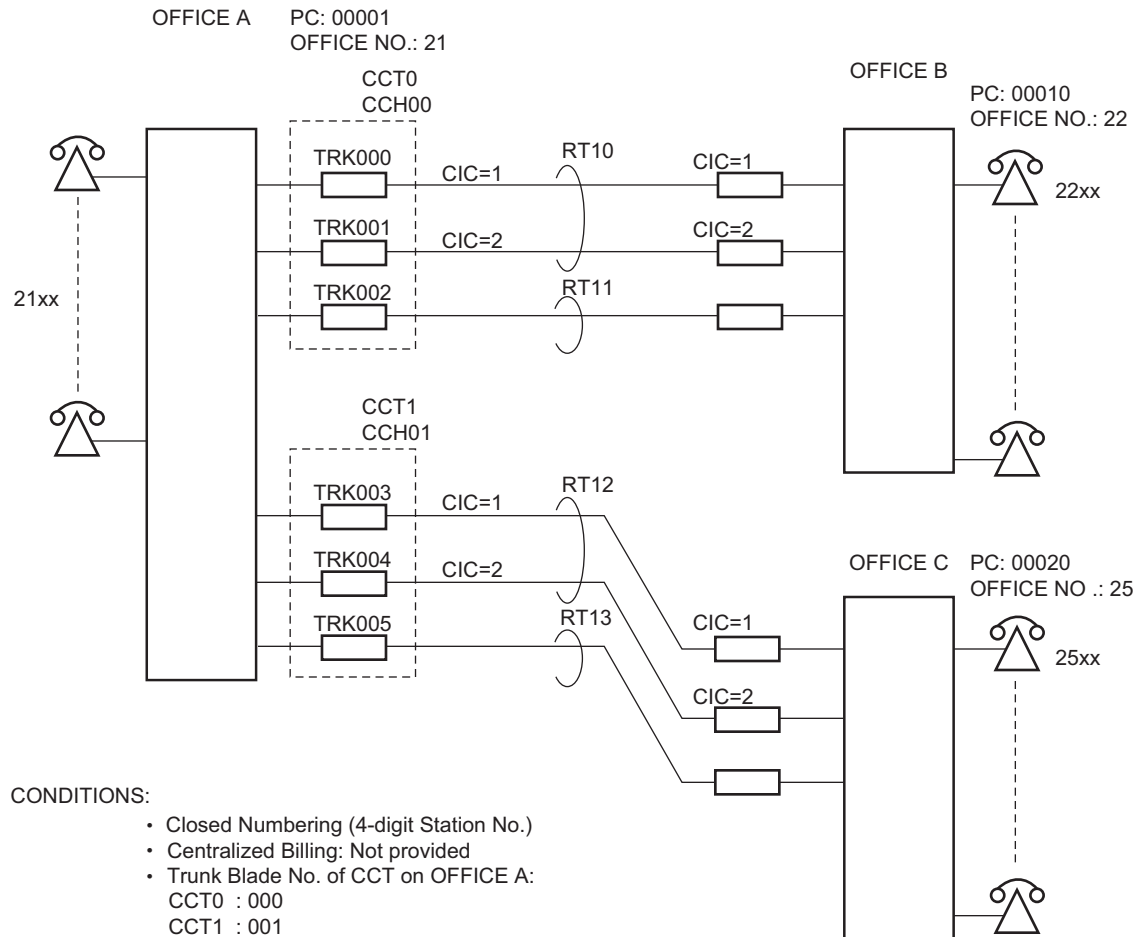
<u>Command Code</u>	<u>1st Data</u>	<u>2nd Data</u>	
30 Y=35	000	001	: CIC1
	001	002	: CIC2
	003	001	: CIC1
	004	002	: CIC2

(7) Assign the CCH data.

<u>Command Code</u>	<u>1st Data</u>	<u>2nd Data</u>	
A7 Y=00	00 01	002 005	] Common Signaling Channel assignment
A7 Y=01	00 01	00001 00001	] Originating Point Code (OPC) assignment
A7 Y=02	00 01	00010 00020	] Destination Point Code (DPC) assignment
A7 Y=06	00 01	0820 0820	] Originating Office number assignment
A8 Y=0	00010 00020	00 01	] Destination Point Code (DPC) to which a signaling message is transferred.

Sample Data Programming for Closed Numbering System

EXAMPLE



For office A, the following programming is required:

- (1) Assign the CCT blade.

<u>Command Code</u>	<u>1st Data</u>	<u>2nd Data</u>	
05 Y=0	010101	42	: CCT0
	010201	42	: CCT1
05 Y=1	010101	000	: Trunk Blade No. 000
	010201	001	: Trunk Blade No. 001

- (2) Assign the CCT blade parameters.
(These data assignments are only for 24CCT.)

<u>Command Code</u>	<u>1st Data</u>	<u>2nd Data</u>
AA Y=00	000	0
	001	0
AA Y=01	000	0/1
	001	0/1
AA Y=02	000	0/1
	001	0/1

- (3) Assign a trunk route number to the CCT trunks.

<u>Command Code</u>	<u>1st Data</u>	<u>2nd Data</u>	
30 Y=00	000	10	] : RT10
	001	10	
	002	11	
	003	12	] : RT12
	004	12	
	005	13	
			: RT13

(4) Assign the trunk route data.

<u>Command Code</u>	<u>1st Data</u>	<u>2nd Data</u>		
35 Y=000	10	04]	Tie Line route assignment
	11	04		
	12	04		
	13	04		
35 Y=001	10	7]	Dialing signal type
	11	7		
	12	7		
	13	7		
35 Y=004	10	2]	Answer Signal
	11	2		
	12	2		
	13	2		
35 Y=005	10	1]	Release Signal
	11	1		
	12	1		
	13	1		
35 Y=009	10	03]	Incoming connection signal
	11	03		
	12	03		
	13	03		
35 Y=020	10	00]	Sender start condition
	11	00		
	12	00		
	13	00		
35 Y=090	10	0]	No. 7 CCIS facilities assignment
	11	0		
	12	0		
	13	0		

(5) Assign the CCH number to each route.

<u>Command Code</u>	<u>1st Data</u>	<u>2nd Data</u>		
35 Y=091	10	00	]	: CCH 00
	11	00		
	12	01	]	: CCH 01
	13	01		

(6) Assign a CIC to each voice channel trunk.

<u>Command Code</u>	<u>1st Data</u>	<u>2nd Data</u>	
30 Y=035	000	001	: CIC1
	001	002	: CIC2
	003	001	: CIC1
	004	002	: CIC2

(7) Assign the CCH data.

<u>Command Code</u>	<u>1st Data</u>	<u>2nd Data</u>	
A7 Y=00	00	002	] Common Signaling Channel assignment
	01	005	
A7 Y=01	00	00001	] Originating Point Code (OPC) assignment
	01	00001	
A7 Y=02	00	00010	] Destination Point Code (DPC) assignment
	01	00020	
A8 Y=0	00010	00	] Destination Point Code (DPC) to which a signaling message is transferred.
	00020	01	

(8) Assign the route access data.

<u>Command Code</u>	<u>1st Data</u>	<u>2nd Data</u>	
20 Y=0	22	A129	: Access Code=22
20 Y=0	25	A129	: Access Code=25
8A Y=A000	3	4007	: Area Code Development Pattern No. 7
8A Y=4007	22	0000	: Route Pattern 000 (22XX)
	25	0001	: Route Pattern 001 (25XX)
8A Y=0000	1	00010	: Route 10 access by 22XX
8A Y=0001	1	00012	: Route 12 access by 25XX
20 Y=0	21	804	: 4 digits station (for originating station No.)
85 Y=5	22	04	] Maximum number of digits dialed is 4.
	25	04	

NOTE: The example shows:

22 XX
 └── Station numbers in office B
25 XX
 └── Station numbers in office C

No second dial tone will be heard.
 No digits will be added.

Route Advance Assignment

To provide the Alternative Routing (another trunk route) for CCT when an outgoing call via No. 7 CCIS is not available due to a fault occurrence, do the following programming.

START	DESCRIPTION	DATA
CM35	Provide the voice channel route of CCT with Alternative Routing for a fault occurrence.	<ul style="list-style-type: none"> Y=186 (1) 00-63: Trunk Route No. (2) 0 : To provide 1◀: Not provided
	Provide the tandem calls with Alternative Routing for a fault occurrence.	<ul style="list-style-type: none"> Y=192 (1) 00-63: Trunk Route No. (2) 0 : To provide 1◀: Not provided
CM08	Provide the system with Alternative Routing of CCIS outgoing call when all outgoing trunks of tandem office are busy.	(1) 372 (2) 0 : To provide 1◀: Not provided
CM41	Set the PBR timer when establishing a tandem connection.	<ul style="list-style-type: none"> Y=0 (1) 104 (2) 02-99: 02-99 seconds (1 second increments) If no data is set, the default setting is 7 seconds.
	NOTE: Usually, it is recommended to set the second data to 33 (33 sec.).	
CM29	Assign a Numbering Plan Group to each tenant.	(1) 00-63: Tenant No. (2) 710-713 : Numbering Plan Group 0-3 NONE◀: Numbering Plan Group 0
CM20	Assign the access code for LCR Group 0-3.	<ul style="list-style-type: none"> Y=0-3 Numbering Plan Group 0-3 (1) X-XXXX: Access Code (2) A126: LCR Group 0 A127: LCR Group 1 A128: LCR Group 2 A129: LCR Group 3
CM90	Assign a service access key for LCR Group 0-2 to Multiline Terminal, if required.	<ul style="list-style-type: none"> Y=00 (1) My Line No. + <input type="text"/> + Key No. (2) F0A26-F0A28: LCR Group 0-2
A		

A	DESCRIPTION	DATA
CM35	Assign the Area Code Development Pattern number for maximum digit analysis to each trunk route.	<ul style="list-style-type: none"> Y=076 (1) 00-63: Trunk Route No. (2) 05-07: Area Code Development Pattern No. 5-7
CM8A	Assign an Area Code Development Pattern number to each LCR Group.	<ul style="list-style-type: none"> Y=A000 (1) 0-3: LCR Group 0-3 (2) 4005-4007: Area Code Development Pattern No. 5-7
	Assign a Route Pattern number to each area code for the Area Code Development Pattern number assigned by CM8A Y=A000.	<ul style="list-style-type: none"> Y=4005-4007 Area Code Development Pattern No. 5-7 (1) X...X: Area Code, Maximum 8 digits (2) 0000-0255: Route Pattern No. 000-255
	Assign a LCR Pattern number to each area code for the Area Code Development Pattern number assigned by CM8A Y=A000.	<ul style="list-style-type: none"> Y=4005-4007 Area Code Development Pattern No. 5-7 (1) X...X: Area Code, Maximum 8 digits (2) 5000-5255: LCR Pattern No. 000-255
	For area code deletion, designate the digits to be not deleted.	<ul style="list-style-type: none"> Y=5000-5255 LCR Pattern No. 000-255 (1) 152: Deletion of all digits of the area code assigned by CM8A Y=4005-4007 (2) 1◀: Not deleted
	Assign the next Route Pattern number to the Route Pattern number assigned by CM8A Y=4005-4007.	<ul style="list-style-type: none"> Y=0000-0255 Route Pattern No. 000-255 (1) 0: Designation of next table (2) 0000-0255: Next Route Pattern No. 000-255
	<p>NOTE: This data is required to expand the order of LCR selection that is assigned by CM8A Y=0000-0255. The order of LCR selection can be expand to the maximum seventh.</p>	
B		

B

CM8A

DESCRIPTION

Specify the order of LCR selection for the Route Pattern number assigned by CM8A Y=4005-4007.

DATA

- Y=0000-0255 Route Pattern No. 000-255
- (1) 1-4: Order of LCR Selection
 - 1: 1st
 - 2: 2nd
 - 3: 3rd
 - 4: 4th
- (2) XXX ZZ
 - XXX: 000-255: LCR Pattern No.
 - ZZ : 00-63: Trunk Route No.

NOTE: You cannot assign CM8A Y=0000-0255 1st data 0 (Destination of next table) and 1st data 4 (4th LCR selection) simultaneously. The latest data assignment including system data memory clear is effective. The other assigned data is set as NONE.

Example:

Y	1ST DATA		2ND DATA	ORDER OF LCR SELECTION
0000	0	Destination of next table	0001	
	1	1st LCR selection	00000	1st LCR selection
	2	2nd LCR selection	00101	2nd LCR selection
	3	3rd LCR selection	00202	3rd LCR selection
	4	4th LCR selection	NONE (Unavailable)	
0001	0	Destination of next table	NONE	
	1	1st LCR selection	00303	4th LCR selection
	2	2nd LCR selection	00404	5th LCR selection
	3	3rd LCR selection	00505	6th LCR selection
	4	4th LCR selection	00606	7th LCR selection

CM85

Specify the maximum number of sending digits to be dialed by calling party. The maximum number of sending digits including the area codes should be assigned to each area code.

- Y=5-7 Area Code Development Pattern No. 5-7 assigned by CM8A Y=A000
- (1) X-X...X: Area code dialed, Maximum 8 digits
- (2) 01-24◀: 1 digit-24 digits
25-79 : 25 digits-79 digits

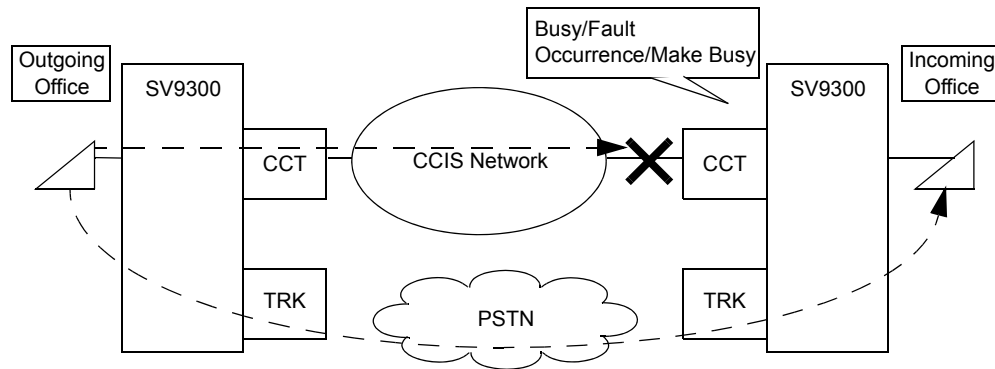
CMA7

Assign an ACM signal waiting timer after sending IAI signal in the outgoing calls via CCIS to CCH number.

- Y=10
- (1) 00-63: CCH No.
- (2) 01-14: 2-28 seconds (2 second increments)
15◀ : 6 seconds

END

When the offices are connected with No. 7 CCIS, and if all outgoing trunks of the incoming office are busy, or all outgoing trunks are in the make busy condition in the incoming office, or the no answer timer of outgoing call (T1 timer) time-out occurs, the incoming office can send the busy/fault occurrence message to the outgoing office. The outgoing office where the message is received can detour the call via an another trunk route such as ISDN.



To provide this detouring feature for the systems, do the following programming to the incoming office. In outgoing office, program the data for providing the Alternative Routing in advance.

START	DESCRIPTION	DATA
CM08	<p>Provide the system with the alternative routing when all outgoing trunks of incoming office is in the make busy condition.</p> <p>NOTE: <i>The make busy condition means when the CME5 Y=1 is set to 0.</i></p> <p>Provide the system with the alternative routing when the no answer timer of outgoing call (T1 timer) time-out occurs.</p>	<p>(1) 624 (2) 0 : To provide (CGC sending) 1 ◀: Not provided (CFL sending)</p> <p>(1) 666 (2) 0 : To provide (CGC sending) 1 ◀: Not provided (CFL sending)</p>
END		

CCIS FEATURE PROGRAMMING

This section explains the feature programming of each CCIS service.

The following features require no programming.

- Attendant Controlled Conference-CCIS
- Call Processing Indication-CCIS
- Called Station Status Display-CCIS
- Digital Display-Station-CCIS
- Digital Display-Trunk-CCIS
- Elapsed Time Display-CCIS
- Hands-Free Answerback-CCIS
- Individual Attendant Access-CCIS
- Service Display-CCIS
- Station-Controlled Conference-CCIS
- Station-to-Station Calling-Operator Assistance-CCIS

ATTENDANT CAMP-ON WITH TONE INDICATION-CCIS

General Description

This feature allows the Attendant Console to perform a full automatic Camp-On operation, even when a call-forwarded station is busy at a call-forwarding from the Attendant Console to a remote office station via CCIS, by enabling the Attendant Console to automatically recall the station for connecting the external call after the station becomes idle.

Station Application

Attendant Console

Programming

START	DESCRIPTION	DATA
CM20	Assign the access code for LCR Group 3. NOTE: <i>When providing Attendant Camp-On with Tone Indication-CCIS, be sure to set the second data to A129 (LCR Group 3).</i>	<ul style="list-style-type: none"> Y=0-3 Numbering Plan Group 0-3 (1) X-XXXX: Access Code (2) A129: LCR Group 3
CM08	Specify the Camp-On Tone sent to busy station.	(1) 068 (2) 0 : Camp on Tone is sent out only the first once 1◀: Camp on Tone is repeated at 4 second intervals
CM36	Allow the connection between a trunk route for external lines and a CCIS trunk route.	<ul style="list-style-type: none"> Y=0 (1) XX ZZ XX: 00-63: Incoming Trunk Route ZZ : 00-63: Outgoing Trunk Route (2) 0: Allow
CM41	Specify the recall timing of Camp-On.	<ul style="list-style-type: none"> Y=0 (1) 00 (2) 01-14: 2.4-33.6 seconds (2.4 second increments) 15-24: 38.4-124.8 seconds (9.6 second increments) If no data is set, the default setting is 31.2-33.6 seconds.
END		

To display the busy station number and name on an Attendant Console when reentering a Camped-On trunk by pressing the loop key:

START	DESCRIPTION	DATA
<div>CM08</div>	Provide the Attendant Console with the busy station number/name display when reentering a Camped-On trunk.	(1) 441 (2) 0 : Available 1 ◀: Not available
END		

Operating Procedure

To activate an Attendant Camp-On with Tone Indication-CCIS from an Attendant Console:

1. Dial the desired station number at another switching office and receive busy tone.
2. Press the **RELEASE** key.
3. A Camp-On tone is sent to the busy station and Camp-On is set.

To cancel an Attendant Camp-On with Tone Indication-CCIS from an Attendant Console:

1. Press the **LOOP** key corresponding to the held call and connect to the waiting trunk party.
2. Press the **DEST** key and receive busy tone.
3. Press the **CANCL** key.

AUTOMATIC RECALL-CCIS

General Description

This feature works as a time reminder. When an Attendant-handled call through CCIS remains on hold, camped-on, or ringing unanswered for a fixed interval, the Attendant is automatically alerted.

Station Application

Attendant Console

Programming

START	DESCRIPTION	DATA
<div>CM41</div>	<p>Specify the timing for Automatic Recall. If no data is set, the following timing will be applied:</p> <p>Attendant Recall – 31.2-33.6 seconds Non Exclusive Hold – 60-64 seconds Exclusive Hold – 236-240 seconds Transfer Recall – 24-28 seconds Attendant Hold Recall – 31.2-33.6 seconds Camp-On Recall – 24-32 seconds</p>	<ul style="list-style-type: none"> Y=0 (1) 00: Attendant Recall (2) 01-14: 2.4-33.6 seconds (2.4 second increments) 15-24: 38.4-124.8 seconds (9.6 second increments) (1) 11: Attendant Hold Recall (2) 01-14: 2.4-33.6 seconds (2.4 second increments) 15-24: 38.4-124.8 seconds (9.6 second increments)
END		

Operating Procedure

No manual operation is required.

BROKERAGE-HOT LINE-CCIS

General Description

This feature provides a ringdown connection between two stations, each using a Multiline Terminal, in different offices in the CCIS network.

Programming

START	DESCRIPTION	DATA								
CM11	Assign the Virtual Line station number to the required Virtual Port number.	(1) 0000-0999: Virtual Port No. (2) X-XXXXXXXX: Virtual Line station No.								
CM12	Assign the Hot Line to the Virtual Line stations assigned by CM11.	<ul style="list-style-type: none">Y=03 (1) X-XXXXXXXX: Virtual Line station No. (2) 04: Hot Line								
CM71	<p>Allocate the memory area for the Hot Line-Outside call.</p> <p>For example, to assign the 10 Hot Line-Outside calls into No. 100 through No. 109 Memory Slots, 2nd data is "100010". Abbreviated Codes are automatically assigned as shown below:</p> <table><tr><th colspan="2">Abbrev. Codes</th></tr><tr><td>Memory Slot 100</td><td><u>00</u></td></tr><tr><td>∩</td><td>∩</td></tr><tr><td>Memory Slot 109</td><td><u>09</u></td></tr></table>	Abbrev. Codes		Memory Slot 100	<u>00</u>	∩	∩	Memory Slot 109	<u>09</u>	(1) 65: For Hot Line-Outside (2) XXX YYY XXX: 000-299: Starting Memory Slot No. in blocks YYY: 001-300: No. of Memory Slots to be assigned in blocks
Abbrev. Codes										
Memory Slot 100	<u>00</u>									
∩	∩									
Memory Slot 109	<u>09</u>									
A										

A	DESCRIPTION	DATA									
CM72	Assign the destination party's number and name to each Memory Slot number.	<ul style="list-style-type: none"> Y=0 (1) 000-299: Memory Slot No. (2) XXXX <input type="text"/> YY...Y XXXX: Access Code (Maximum 4 digits) <input type="text"/> : Separator Mark YY...Y : Calling Party's No. (Maximum 26 digits) 									
CM52	Assign the Hot Line pairs. Bidirectional Hot Line should be assigned as follows:	<ul style="list-style-type: none"> Y=1 (1) 000-299: Memory Slot No. (2) XXX...X: Called Party Name Character Code (Maximum 32 digits: 16 characters) See CM77 in the Command Manual. Y=2 (1) 000-299: Memory Slot No. (2) XXX...X: Called Party Name Character by PCPro/CAT (Maximum 16 characters) 									
CM52	<table> <tr> <th>Hot Line Pair No.</th><th>Calling Side</th><th>Called Side</th></tr> <tr> <td>00</td><td>Station A</td><td>Station B</td></tr> <tr> <td>01</td><td>Station B</td><td>Station A</td></tr> </table>	Hot Line Pair No.	Calling Side	Called Side	00	Station A	Station B	01	Station B	Station A	<ul style="list-style-type: none"> Y=00-99 Hot Line pair No. (1) 0: Calling Station 1: Called Station (2) Station No. E00X X: 0-7: DESKCON No. assigned by CM10 Y=00
Hot Line Pair No.	Calling Side	Called Side									
00	Station A	Station B									
01	Station B	Station A									
	NOTE 1: Up to 100 Hot Line stations (50 pair) can be set.	CXX For Called Outside party XX: Abbreviated Code exclusively for Hotline-Outside call assigned by CM71>65									
CM90	Assign the Virtual Line station and RELEASE keys on the Multiline Terminal.	<ul style="list-style-type: none"> NOTE 2: Do not assign station number with first digit "0". Y=00 (1) My Line No. + <input type="text"/> + Key No. (2) X-XXXXXXXX: Virtual Line station No. F1020: Release key 									
<u>END</u>											

Operating Procedure

To access a Brokerage-Hot Line-CCIS from a Multiline Terminal:

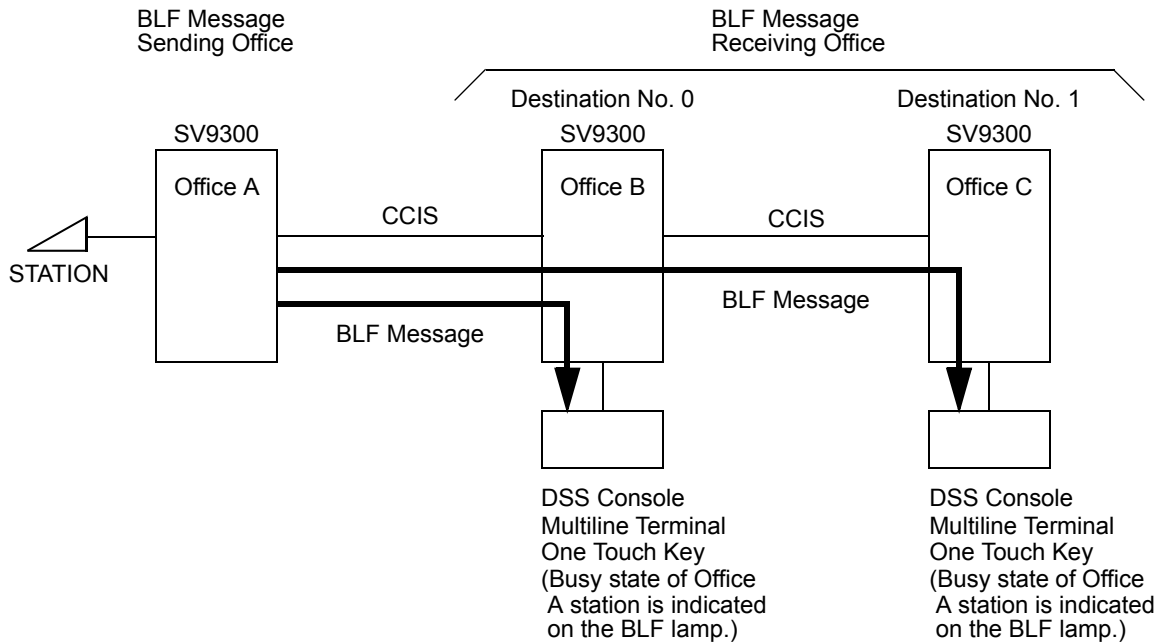
1. Lift the handset or press the **Speaker** key.
2. Press the line/feature key associated with the preassigned station.
The destination station is automatically dialed, ring back tone is heard and the destination station answers.
3. After completion of conversation, hang up or press the **Speaker** key.

To make another Brokerage-Hot Line-CCIS call immediately, press another line/feature key without going on-hook and off-hook.

BUSY LAMP FIELD (BLF)-CCIS

General Description

This feature provides a busy status indication of the predetermined stations within the CCIS network. The visual indication is provided with a red LED associated with each DSS key on the DSS/BLF Console and Multiline Terminal. Pressing the DSS key allows a direct access to the preprogrammed station within the CCIS network.

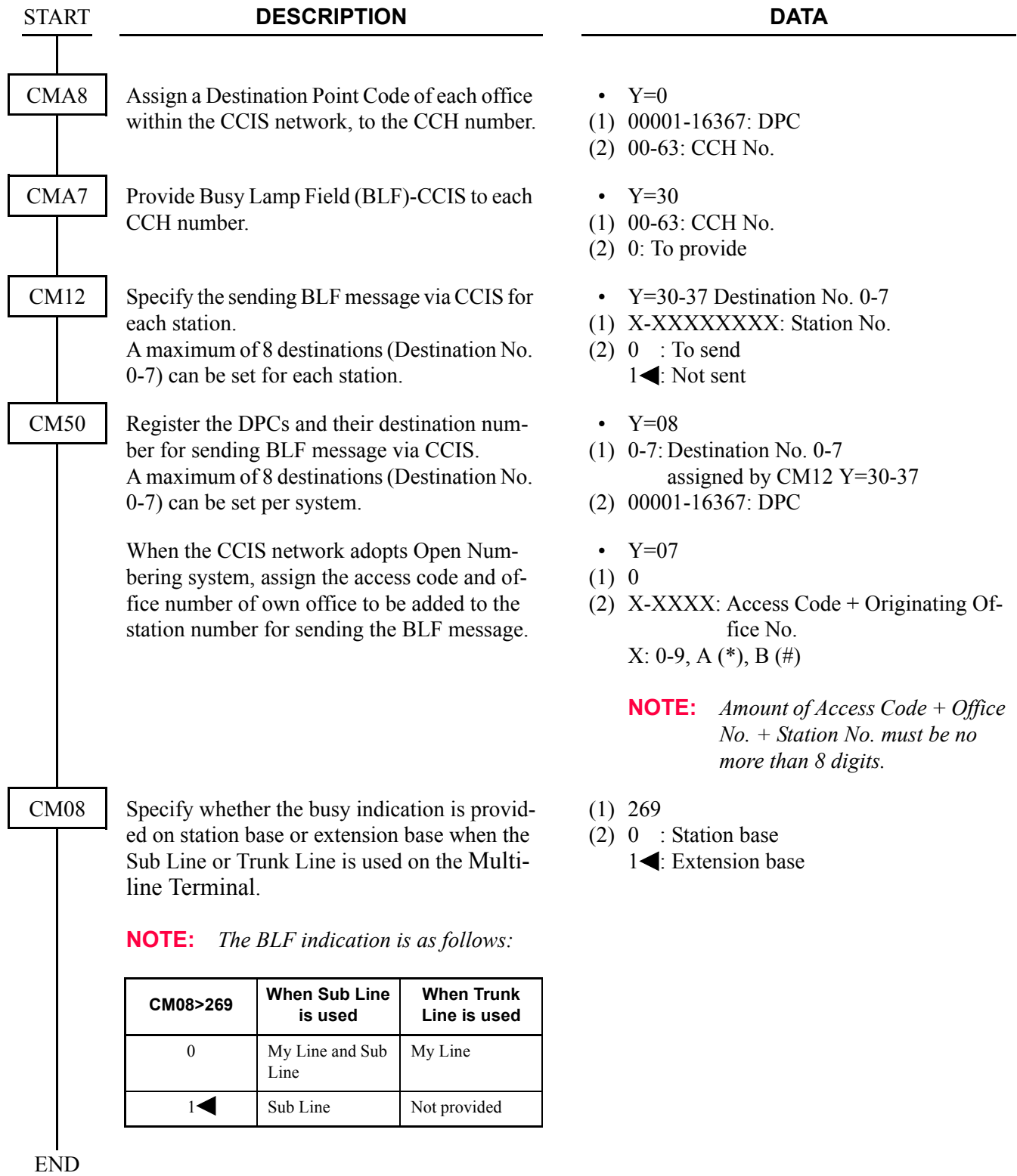


Station Application

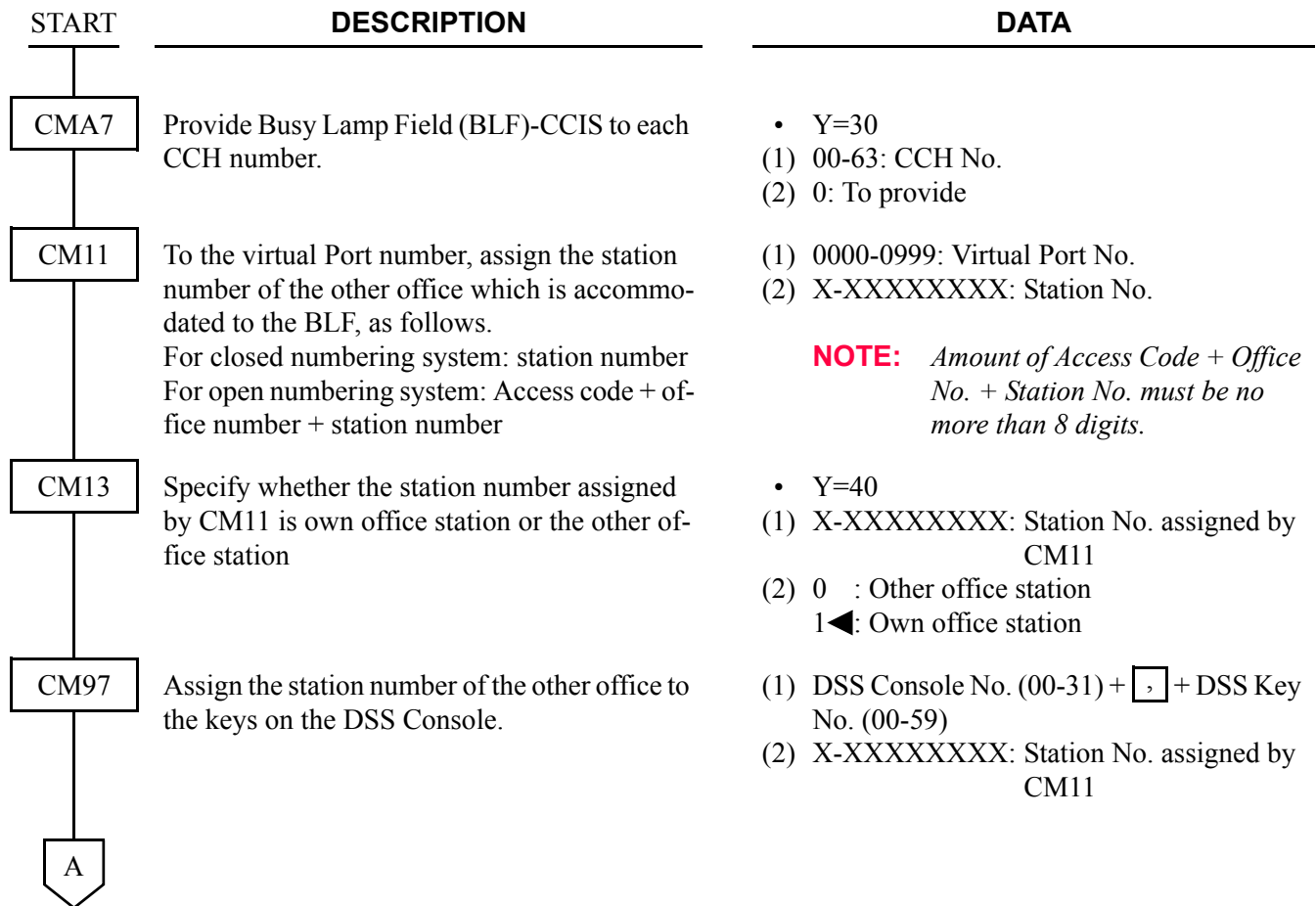
All Multiline Terminals with DSS keys and the associated LEDs, and DSS/BLF Console.

Programming

- For BLF message sending office (Office A)



- For BLF message receiving office (Office B, C)



A

DESCRIPTION

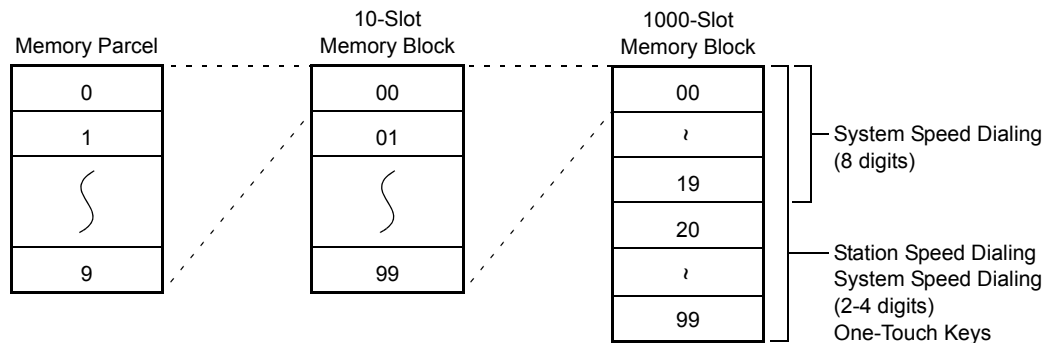
DATA

CM94

Allocate the memory area for Multiline Terminal One Touch keys to each station.

- (1) X-XXXXXXXX: My Line No.
 - (2) WW XX YYY Z
 - WW : 00-99: 1000-Slot Memory Block No.
 - XX : 00-99: 10-Slot Memory Start Block No.
 - YYY : 001-010: Number of 10-Slot Memory Blocks
 - Z : 0/1: Facility for programming the dialed number from the station (Effective/Ineffective)
- NONE ◀: No data

NOTE: For 1000-Slot Memory Block to which any data is not assigned by CM73 Y=0, allocate a station-based memory area using this command.



CM08

Specify whether the line lockout indication is available on the DSS Console.

- (1) 274
- (2) 0 : Available
1 ◀: Not available

END

Operating Procedure

To initiate a call

1. Press the desired DSS key.
2. Lift the handset and converse when party answers.

OR

1. Lift the handset and receive dial tone.
2. Press the desired DSS key.
3. Converse when party answers.

To display Busy or Line Lockout status

No manual operation is required.

BUSY VERIFICATION-CCIS

General Description

This feature permits an Attendant, via the Attendant Console on the 2400 IPX or the SV9300, to interrupt a busy station's call at another switching office connected through CCIS.

Programming

START	DESCRIPTION	DATA
CM08	Provide the system with Busy Verification.	(1) 012 (2) 1◀: Available
	Specify whether the Warning Tone is sent to the connected parties. • Three burst tone [Other than New Zealand] • One burst tone [New Zealand Only]	(1) 046 (2) 0 : Not sent 1◀: To send
	Specify the Warning Tone sent to connected parties.	(1) 045 (2) 0 : Only the first once 1◀: Every 4 seconds
	Specify whether the Warning Tone is sent to C.O. line, when a station/operator overrides a busy station which is connected to a C.O. line.	(1) 076 (2) 0 : To send 1◀: Not sent
CM12	Assign Service Restriction Class A to the required stations.	• Y=02 (1) X-XXXXXXXX: Station No. (2) XX ZZ XX: 00-15◀: Service Restriction Class A
CM15	Allow Busy Verification in Service Restriction Class A assigned by CM12 Y=02.	• Y=009 (1) 00-15: Service Restriction Class A assigned by CM12 Y=02 (2) 1◀: Allow
END		

Operating Procedure

To activate a Busy Verification-CCIS:

1. Press an idle **LOOP** key.
2. Dial the desired station number and receive busy tone.
3. Press the **BV** key.
4. A two-burst tone is sent to connected parties.
5. The Attendant may monitor or join the conversation.
6. Press the **RELEASE** key to disengage.

CALL BACK-CCIS

General Description

This feature provides inter-office Call Back. A station that has dialed a busy station at another office can set Call Back-CCIS by dialing a feature access code. When this feature has been set, the setting station will ring as soon as the busy station becomes available.

Programming

START	DESCRIPTION	DATA
CM12	Assign Service Restriction Class A to the required stations.	<ul style="list-style-type: none"> Y=02 (1) X-XXXXXXXX: Station No. (2) XX ZZ XX: 00-15◀: Service Restriction Class A
CM15	Allow Call Back in Service Restriction Class A assigned by CM12 Y=02.	<ul style="list-style-type: none"> Y=003 (1) 00-15: Service Restriction Class A assigned by CM12 Y=02 (2) 1◀: Allow
CM20	Assign the access code for Call Back.	<ul style="list-style-type: none"> Y=0-3 Numbering Plan Group 0-3 (1) X-XXXX: Access Code (2) A004: Set A005: Cancel
CM90	Assign a Call Back key to the Multiline Terminal, if desired.	<ul style="list-style-type: none"> Y=00 (1) My Line No. + <input type="text"/> + Key No. (2) F0004: Trunk Queuing-Outgoing/Call Back
END		

Operating Procedure

Single-Line Telephone

To set Call Back-CCIS from a Single-Line Telephone:

1. Dial the desired station number and receive busy tone.
2. Press the hook switch and receive Feature Dial Tone.
3. Dial the Call Back feature access code and receive Service Set Tone.
4. Replace the handset.
5. When the busy station becomes idle, the setting station will ring.
6. When the setting station answers, the originally called station will ring.

To cancel Call Back-CCIS from a Single-Line Telephone:

1. Lift the handset and receive dial tone.
2. Dial the Call Back cancellation code and receive Service Set Tone.

Multiline Terminal

To set Call Back-CCIS from a Multiline Terminal:

1. Dial the desired station number and receive busy tone.
2. Press the Call Back feature key and receive Service Set Tone. The LCD shows:

SET	XXXX
(TIME DISPLAY)	

Called station number
is displayed.

3. Replace the handset.
4. When the busy station becomes idle, the setting station will ring. The LCD shows:

CALL BACK	XXXX
(TIME DISPLAY)	

Called station number
flashes at calling station.

5. When the setting station answers, the originally called station will ring.
6. The originally called station's LCD shows:

XXXX
(TIME DISPLAY)

Called station number
is displayed.

To cancel a Call Back-CCIS from a Multiline Terminal:

1. Lift the handset or press the **Speaker** key and receive dial tone.
2. Press the Call Back feature key and receive Service Set Tone. The feature is canceled.
3. The LCD shows:

CANCEL XXXX
(TIME DISPLAY)

CALL FORWARDING-ALL CALLS-CCIS / MULTIPLE CALL FORWARDING-ALL CALLS-CCIS

General Description

This feature permits all calls destined for a particular station to be routed to another station or to an Attendant Console, in another office in the CCIS network, regardless of the status (busy or idle) of the called station. The activation and cancellation of this feature may be accomplished by either the station user or an Attendant.

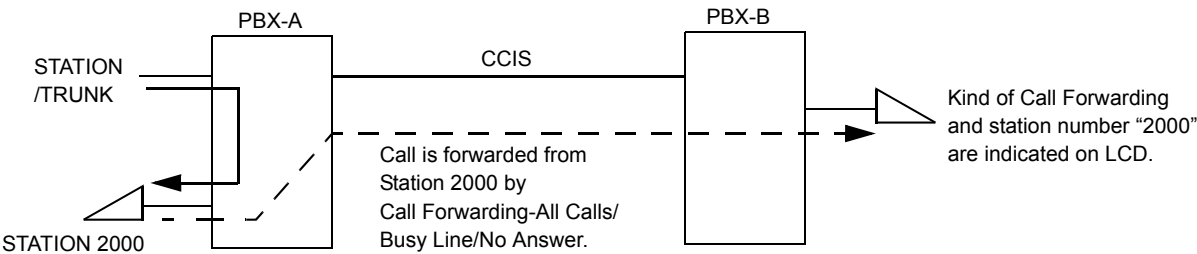
Programming

START	DESCRIPTION	DATA
CM12	Assign Service Restriction Class A to the required stations.	<ul style="list-style-type: none"> Y=02 (1) X-XXXXXXXX: Station No. (2) XX ZZ XX: 00-15◀: Service Restriction Class A
CM15	Allow Call Forwarding-All Calls and Call Forwarding-All Calls-Outside in Service Restriction Class A assigned by CM12 Y=02. NOTE: When providing Call Forwarding-All Calls-Outside, set "1" (Allow) for Y=000, Y=026 of CM15.	<ul style="list-style-type: none"> Y=000 Call Forwarding-All Calls Y=026 Call Forwarding-All Calls-Outside (1) 00-15: Service Restriction Class A assigned by CM12 Y=02 (2) 1◀: Allow
CM20	Assign an access code for Call Forwarding-All Calls Set and Cancel respectively.	<ul style="list-style-type: none"> Y=0-3 Numbering Plan Group 0-3 (1) X-XXXX: Access Code (2) A010: Call Forwarding-All Calls Set A011: Call Forwarding-All Calls Cancel
CM35	To apply this feature to incoming calls, assign trunk route combinations for the tandem connection.	<ul style="list-style-type: none"> Y=005 (1) 00-63: Trunk Route No. (2) 1◀: Release Signal arrives
CM36	Allow the tandem connection to the incoming/outgoing trunk route.	<ul style="list-style-type: none"> Y=0 (1) XX ZZ XX: 00-63: Incoming Trunk Route ZZ : 00-63: Outgoing Trunk Route (2) 0: Allow
A		

A	DESCRIPTION	DATA
CM08	<p>Allow Call Forwarding-Outside-CCIS.</p> <p>Specify the Call Forwarding-All Calls-Outside setting operation.</p> <p>Specify displaying the first forwarding station number via CCIS or the second forwarding station number of own office on LCD of forwarding destination Multiline Terminal.</p> <p>Assign whether an extension can set the destination of Call Forwarding-All Calls-Outside by entering only a trunk access code.</p>	<p>(1) 370 (2) 1◀: Allowed</p> <p>(1) 222 (2) 0 : Setting when the station goes on-hook/when receiving Service Set Tone (PBR time out) 1◀: Setting when receiving Service Set Tone (PBR time out)</p> <p>(1) 564 (2) 0 : The first forwarding number via CCIS 1◀: The second forwarding number of own office</p> <p>(1) 386 (2) 0 : Restricted 1◀: Allowed</p>
CMA7	Allow or restrict Multiple Call Forwarding-All Calls/Busy Line/No Answer-CCIS for each CCH number.	<ul style="list-style-type: none"> Y=29 <p>(1) 00-63: CCH No. (2) 0 : Allowed (Maximum 7 times) 1◀: Restricted (Only once)</p>
CM42	Specify the number of times of Multiple Call Forwarding-All Calls/Busy Line/No Answer-CCIS.	<p>(1) 72 (2) 01-07: 1 time-7 times If no data is set, the default setting is 5 times.</p>
CM65	Provide Call Forwarding feature with each tenant as per incoming call type.	<ul style="list-style-type: none"> Y=23 Internal Call or ATT assisted Call Y=24 C.O. Incoming Call Y=25 Tie Line Incoming Call <p>(1) 00-63: Tenant No. (2) 1◀: Call Forwarding-All Calls</p>
B		

	DESCRIPTION	DATA
B		
CM48	Select the Dial Tone on setting Call Forwarding-All Calls.	<ul style="list-style-type: none">Y=2(1) 13: Dial Tone on Setting Call Forwarding-All Calls(2) 0 : Special Dial Tone1◀: Dial Tone
CM90	Assign the Call Forwarding-All Calls key to a Multiline Terminal, if desired.	<ul style="list-style-type: none">Y=00(1) My Line No. + [] + Key No.(2) F0010: Call Forwarding-All Calls Set/Cancel
END		

When a call is forwarded through CCIS by Call Forwarding-All Calls/-Busy Line/-No Answer, the kind of Call Forwarding and the station number which is setting the service can be indicated on the LCD of the forwarding destination Multiline Terminal.

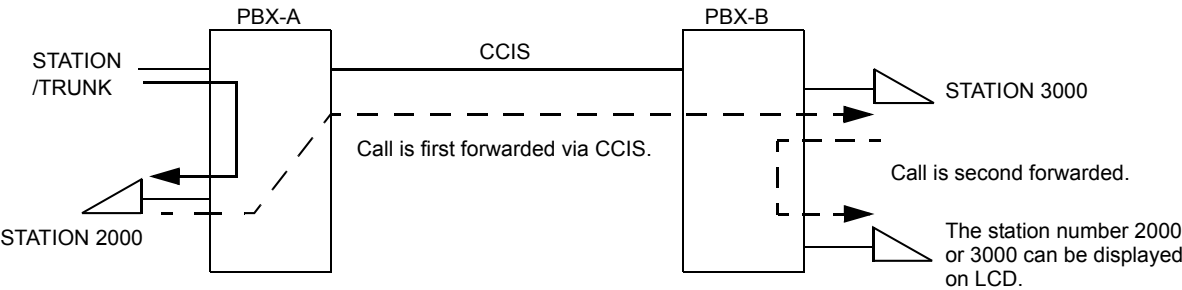


To provide this feature, do the following programming.

- On the forwarded destination side PBX (PBX-B)

START	DESCRIPTION	DATA
CM12	Assign Service Restriction Class C to the required stations.	<ul style="list-style-type: none">Y=07(1) X-XXXXXXXX: Station No.(2) XX: 00-15◀: Service Restriction Class C
END		

When a call is forwarded twice, this feature enables to display the first forwarding station number via CCIS or the second forwarding station number of own office on LCD of the forwarding destination Multiline Terminal.



- On the forwarded destination side PBX (PBX-B)

START	DESCRIPTION	DATA
CM08	<p>Specify to display the first forwarding station number via CCIS or the second forwarding station number of own office on LCD of forwarding destination Multiline Terminal.</p> <p>NOTE: <i>In the case of not forwarding via CCIS, the number to be displayed on LCD is always forwarding number of own office, regardless of setting 2nd data=0.</i></p>	<p>(1) 564</p> <p>(2) 0 : The first forwarding number via CCIS</p> <p>1◀: The second forwarding number of own office</p>
END		

Operating Procedure

Single Line Telephone

To set a Call Forwarding-All Calls-CCIS from a Single Line Telephone:

1. Lift the handset and receive dial tone.
2. Dial the Call Forwarding-All Calls feature access code and receive Feature Dial Tone.
3. Dial the outgoing trunk access code and receive a single burst of Service Set Tone.
(This operation is required for a network using Open Numbering Plan.)
4. Dial the desired target station number and receive Service Set Tone.
5. Wait approximately five seconds and receive Service Set Tone.

To cancel a Call Forwarding-All Calls-CCIS from a Single Line Telephone:

1. Lift the handset and receive dial tone.
2. Dial the Call Forwarding-All Calls cancellation code and receive Service Set Tone.

Attendant Console

To set a Call Forwarding-All Calls-CCIS from an Attendant Console:

1. Press an idle **LOOP** key.
2. Dial the Call Forwarding-All Calls feature access code and receive Feature Dial Tone.
3. Dial the originating station number.
4. Dial the outgoing trunk access code and receive a single burst of Service Set Tone.
(This operation is required for a network using Open Numbering Plan.)
5. Dial the desired target station number and receive Service Set Tone.
6. Press the **RELEASE** key.

To cancel a Call Forwarding-All Calls-CCIS from an Attendant Console:

1. Press an idle **LOOP** key.
2. Dial the Call Forwarding-All Calls cancellation code and receive Feature Dial Tone.
3. Dial the originating station number and receive Service Set Tone.
4. Press the **RELEASE** key.

NOTE: *The Attendant Console can set/cancel Call Forwarding-All Calls for stations within the local system in which the Attendant Console resides.*

Multiline Terminal

To set a Call Forwarding-All Calls-CCIS from a Multiline Terminal:

1. Lift the handset or press the **Speaker** key and receive dial tone.
2. Press the Call Forwarding-All Calls feature key and receive Feature Dial Tone.
3. Dial the outgoing trunk access code and receive a single burst of Service Set Tone.
(This operation is required for a network using Open Numbering Plan.)
4. Dial the desired target station number and receive Service Set Tone.
5. Wait approximately five seconds and receive Service Set Tone. The LED lights and the LCD shows:

SET XXXX
(TIME DISPLAY)

Forwarding station number
is displayed.

6. Replace the handset or press the **Speaker** key.

To cancel a Call Forwarding-All Calls-CCIS from a Multiline Terminal:

1. Lift the handset or press the **Speaker** key and receive dial tone.
2. Press the Call Forwarding-All Calls feature key. The LCD shows:

CF ALL YYY
(TIME DISPLAY)

3. Dial “*” and receive Service Set Tone. The LED of the associated feature key will go out. The LCD shows:

CANCEL
(TIME DISPLAY)

4. Replace the handset or press the **Speaker** key.

CALL FORWARDING-BUSY LINE-CCIS / MULTIPLE CALL FORWARDING-BUSY LINE-CCIS

General Description

This feature permits a call to a busy station to be immediately forwarded to a predesignated station or to an Attendant Console in another office in the CCIS network.

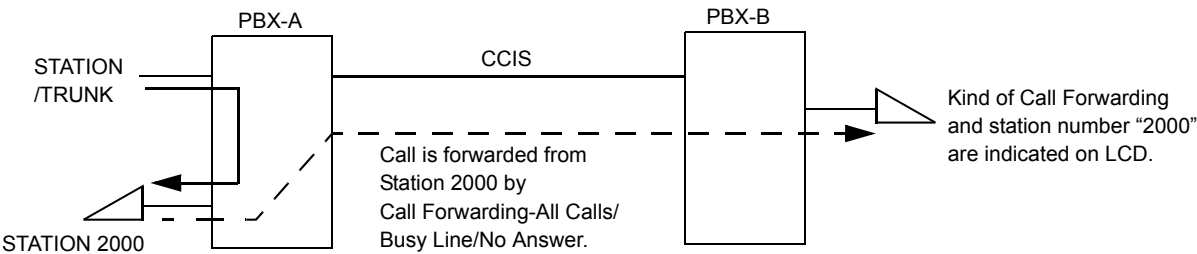
Programming

START	DESCRIPTION	DATA
CM12	Assign Service Restriction Class A to the required stations.	<ul style="list-style-type: none"> Y=02 (1) X-XXXXXXXX: Station No. (2) XX ZZ XX: 00-15◀: Service Restriction Class A
CM15	Allow Call Forwarding-Busy Line and Call Forwarding-Busy Line-Outside in Service Restriction Class A assigned by CM12 Y=02. NOTE: <i>When providing Call Forwarding-Busy Line-Outside, set "1" (Allow) for Y=011, Y=028, Y=012, Y=029 of CM15.</i>	<ul style="list-style-type: none"> Y=011 Call Forwarding-Busy Line Y=028 Call Forwarding-Busy Line-Outside Y=012 Call Forwarding-Busy Line/No Answer Y=029 Call Forwarding-Busy Line-Outside/No Answer-Outside (1) 00-15: Service Restriction Class A assigned by CM12 Y=02 (2) 1◀: Allow
CM20	Assign an access code for Call Forwarding-Busy Line Set and Cancel respectively.	<ul style="list-style-type: none"> Y=0-3 Numbering Plan Group 0-3 (1) X-XXXX: Access Code (2) A012: Call Forwarding-No Answer/Busy Line Set A013: Call Forwarding-No Answer/Busy Line Cancel
CM35	To apply this feature to incoming calls, assign trunk route combinations for the tandem connection.	<ul style="list-style-type: none"> Y=005 (1) 00-63: Trunk Route No. (2) 1◀: Release Signal arrives
A		

A	DESCRIPTION	DATA
CM36	Allow the tandem connection to the incoming/outgoing trunk route.	<ul style="list-style-type: none"> Y=0 (1) XX ZZ XX: 00-63: Incoming Trunk Route ZZ : 00-63: Outgoing Trunk Route (2) 0: Allow
CM08	<p>Allow Call Forwarding-Outside-CCIS.</p> <p>Specify the Call Forwarding-Busy Line-Outside setting operation.</p> <p>Specify whether or not to prioritize Station Hunting over Do Not Disturb at receiving an internal incoming call, when the Pilot station of a Station Hunting group is set Do Not Disturb./Specify whether to transfer to the destination of Call Forwarding-Busy Line or of Do Not Disturb by CM51 Y=10, when the station is set Do Not Disturb during setting Call Forwarding-Busy Line.</p> <p>Assign whether an extension can set the destination of Call Forwarding-Busy Line-Outside by entering only a trunk access code.</p>	(1) 370 (2) 1◀: Allowed (1) 222 (2) 0 : Setting when the station goes on-hook/when receiving Service Set Tone (PBR time out) 1◀: Setting when receiving Service Set Tone (PBR time out) (1) 240 (2) 0 : To prioritize Station Hunting/To the destination of Call Forwarding-Busy Line 1◀: To prioritize Do Not Disturb/To the destination of Do Not Disturb by CM51 Y=10 (1) 386 (2) 0 : Restricted 1◀: Allowed
CMA7	Allow or restrict Multiple Call Forwarding-All Calls/Busy Line/No Answer-CCIS for each CCH number.	<ul style="list-style-type: none"> Y=29 (1) 00-63: CCH No. (2) 0 : Allowed (Maximum 7 times) 1◀: Restricted (Only once)
CM42	Specify the number of times of Multiple Call Forwarding-All Calls/Busy Line/No Answer-CCIS.	(1) 72 (2) 01-07: 1 time-7 times If no data is set, the default setting is 5 times.
B		

	DESCRIPTION	DATA
B		
CM65	Provide Call Forwarding feature with each tenant as per incoming call type.	<ul style="list-style-type: none">Y=23 Internal Call or ATT assisted callY=24 C.O. Incoming CallY=25 Tie Line Incoming Call <p>(1) 00-63: Tenant No. (2) 1◀: Call Forwarding-Busy Line</p>
CM90	Assign the Call Forwarding-Busy Line key to a Multiline Terminal, if desired.	<ul style="list-style-type: none">Y=00 <p>(1) My Line No. + [] + Key No. (2) F0014: Call Forwarding-Busy Line Set/Cancel</p> <p>For setting the same key as Call Forwarding-No Answer</p> <p>(1) My Line No. + [] + Key No. (2) F0012: Call Forwarding-No Answer/Busy Line Set/Cancel</p>
END		

When a call is forwarded through CCIS by Call Forwarding-All Calls/-Busy Line/-No Answer, the kind of Call Forwarding and the station number which is setting the service can be indicated on the LCD of the forwarding destination Multiline Terminal.

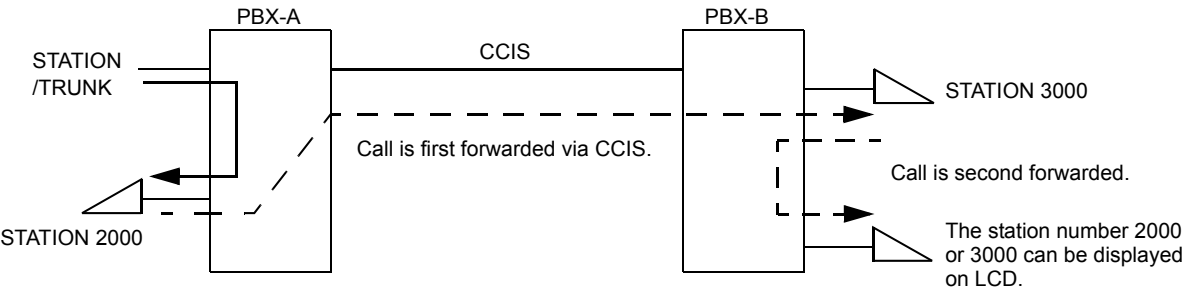


To provide this feature, do the following programming.

- On the forwarded destination side PBX (PBX-B)

START	DESCRIPTION	DATA
CM12	Assign Service Restriction Class C to the required stations.	<ul style="list-style-type: none">Y=07(1) X-XXXXXXXX: Station No.(2) XX: 00-15◀: Service Restriction Class C
END		

When a call is forwarded twice, this feature enables to display the first forwarding station number via CCIS or the second forwarding station number of own office on LCD of the forwarding destination Multiline Terminal.



- On the forwarded destination side PBX (PBX-B)

START	DESCRIPTION	DATA
CM08	<p>Specify to display the first forwarding station number via CCIS or the second forwarding station number of own office on LCD of forwarding destination Multiline Terminal.</p> <p>NOTE: <i>In the case of not forwarding via CCIS, the number to be displayed on LCD is always forwarding number of own office, regardless of setting 2nd data=0.</i></p>	<p>(1) 564</p> <p>(2) 0 : The first forwarding number via CCIS</p> <p>1◀: The second forwarding number of own office</p>
END		

Operating Procedure

Single Line Telephone

To set a Call Forwarding-Busy Line-CCIS from a Single Line Telephone:

1. Lift the handset and receive dial tone.
2. Dial the Call Forwarding-Busy Line feature access code and receive Feature Dial Tone.
3. Dial the outgoing trunk access code and receive a single burst of Service Set Tone.
(This operation is required for a network using Open Numbering Plan.)
4. Dial the desired target station number and receive Service Set Tone.
5. Wait approximately five seconds and receive Service Set Tone.

To cancel a Call Forwarding-Busy Line-CCIS from a Single Line Telephone:

1. Lift the handset and receive dial tone.
2. Dial the Call Forwarding-Busy Line cancellation code and receive Service Set Tone.

Attendant Console

To set a Call Forwarding-Busy Line-CCIS from an Attendant Console:

1. Press an idle **LOOP** key.
2. Dial the Call Forwarding-Busy Line feature access code and receive Feature Dial Tone.
3. Dial the originating station number.
4. Dial the outgoing trunk access code and receive a single burst of Service Set Tone.
(This operation is required for a network using Open Numbering Plan.)
5. Dial the desired target station number and receive Service Set Tone.
6. Press the **RELEASE** key.

To cancel a Call Forwarding-Busy Line-CCIS from an Attendant Console:

1. Press an idle **LOOP** key.
2. Dial the Call Forwarding-Busy Line cancellation code and receive Feature Dial Tone.
3. Dial the originating station number and receive Service Set Tone.

NOTE: *The Attendant Console can only set/cancel Call Forwarding-Busy Line for stations within the local system in which the Attendant Console resides.*

Multiline Terminal

To set a Call Forwarding-Busy Line-CCIS from a Multiline Terminal:

1. Lift the handset or press the **Speaker** key and receive dial tone.
2. Press the Call Forwarding-Busy Line feature key and receive Feature Dial Tone.
3. Dial the outgoing trunk access code and receive a single burst of Service Set Tone.
(This operation is required for a network using Open Numbering Plan.)
4. Dial the desired target station number and receive Service Set Tone.
5. Wait approximately five seconds and receive Service Set Tone. The LED lights and the LCD shows:

SET XXXX
(TIME DISPLAY)

Forwarding station number
is displayed.

6. Replace the handset or press the **Speaker** key.

To cancel Call Forwarding-Busy Line-CCIS from a Multiline Terminal:

1. Lift the handset or press the **Speaker** key and receive dial tone.
2. Press the Call Forwarding-Busy Line feature key. The LCD shows:

CF BUSY YYY
(TIME DISPLAY)

3. Dial “*” and receive Service Set Tone. The LED of the associated feature key will go out. The LCD shows:

CANCEL
(TIME DISPLAY)

4. Replace the handset or press the **Speaker** key.

CALL FORWARDING-NO ANSWER-CCIS / MULTIPLE CALL FORWARDING-NO ANSWER-CCIS

General Description

This feature permits a call to an unanswered station to be forwarded to a predesignated station or to an Attendant Console in another office, when the called station does not answer after a predetermined time period.

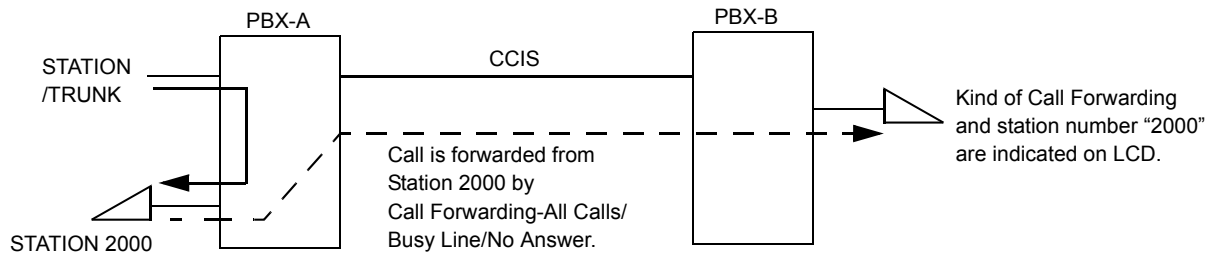
Programming

START	DESCRIPTION	DATA
CM12	Assign Service Restriction Class A to the required stations.	<ul style="list-style-type: none"> Y=02 (1) X-XXXXXXXX: Station No. (2) XX ZZ XX: 00-15◀: Service Restriction Class A
CM15	<p>Allow Call Forwarding-No Answer and Call Forwarding-No Answer-Outside in Service Restriction Class A assigned by CM12 Y=02.</p> <p>When providing Call Forwarding-No Answer-Outside, set "1" (Allow) for Y=010, Y=027 of CM15.</p>	<ul style="list-style-type: none"> Y=010 Call Forwarding-No Answer Y=027 Call Forwarding-No Answer-Outside Y=012 Call Forwarding-Busy Line/No Answer Y=029 Call Forwarding-Busy Line-Outside/No Answer-Outside (1) 00-15: Service Restriction Class A assigned by CM12 Y=02 (2) 1◀: Allow
CM20	Assign an access code for Call Forwarding-No Answer Set and Cancel respectively.	<ul style="list-style-type: none"> Y=0-3 Numbering Plan Group 0-3 (1) X-XXXX: Access Code (2) A012: Call Forwarding-No Answer/Busy Line Set A013: Call Forwarding-No Answer/Busy Line Cancel
CM35	To apply this feature to incoming calls, set the trunk route combinations for the tandem connection.	<ul style="list-style-type: none"> Y=005 (1) 00-63: Trunk Route No. (2) 1◀: Release Signal arrives
A		

A	DESCRIPTION	DATA
CM36	Allow the tandem connection to the incoming/outgoing trunk route.	<ul style="list-style-type: none"> Y=0 (1) XX ZZ XX: 00-63: Incoming Trunk Route ZZ : 00-63: Outgoing Trunk Route (2) 0: Allow
CM08	Allow Call Forwarding-Outside-CCIS.	<ul style="list-style-type: none"> (1) 370 (2) 1◀: Allowed
	Specify the Call Forwarding-No Answer-Outside setting operation.	<ul style="list-style-type: none"> (1) 222 (2) 0 : Setting when the station goes on-hook/when receiving Service Set Tone (PBR time out) 1◀: Setting when receiving Service Set Tone (PBR time out)
	Specify the system operation when terminating a DID call to station with Call Forwarding-No Answer set to a busy destination station. (Destination station has no call forwarding set.)	<ul style="list-style-type: none"> (1) 449 (2) 0 : Ring continuously at forwarded DID station 1◀: Drop to busy signal after time set by CM41 Y=0>01
	Assign whether an extension can set the destination of Call Forwarding-No Answer-Outside by entering only a trunk access code.	<ul style="list-style-type: none"> (1) 386 (2) 0 : Restricted 1◀: Allowed
CMA7	Allow or restrict Multiple Call Forwarding-All Calls/Busy Line/No Answer-CCIS for each CCH number.	<ul style="list-style-type: none"> Y=29 (1) 00-63: CCH No. (2) 0 : Allowed (Maximum 7 times) 1◀: Restricted (Only once)
CM42	Specify the number of times of Multiple Call Forwarding-All Calls/Busy Line/No Answer-CCIS.	<ul style="list-style-type: none"> (1) 72 (2) 01-07: 1 time-7 times If no data is set, the default setting is 5 times.
B		

B	DESCRIPTION	DATA
CM65	Provide Call Forwarding feature with each tenant as per incoming call type.	<ul style="list-style-type: none"> Y=23 Internal Call or ATT assisted call Y=24 C.O. Incoming Call Y=25 Tie Line Incoming Call (1) 00-63: Tenant No. (2) 1◀: Call Forwarding-No Answer
CM41	Specify the timing for Call Forwarding-No Answer for a trunk incoming call.	<ul style="list-style-type: none"> Y=0 (1) 01 (2) 01-30: 4-120 seconds (4 second increments) If no data is set, the default setting is 32-36 seconds.
	Specify the timing for Call Forwarding-No Answer for an internal call or an assisted call.	<ul style="list-style-type: none"> Y=0 (1) 15 (2) 01-30: 4-120 seconds (4 second increments) If no data is set, the default setting is 32-36 seconds.
CM90	Assign the Call Forwarding-No Answer key to a Multiline Terminal, if desired.	<ul style="list-style-type: none"> Y=00 (1) My Line No. + [] + Key No. (2) F0016: Call Forwarding-No Answer Set/Cancel For setting the same key as Call Forwarding-Busy Line: (1) My Line No. + [] + Key No. (2) F0012: Call Forwarding-No Answer/Busy Line Set/Cancel
<u>END</u>		

When a call is forwarded through CCIS by Call Forwarding-All Calls/-Busy Line/-No Answer, the kind of Call Forwarding and the station number which is setting the service can be indicated on the LCD of the forwarding destination Multiline Terminal.

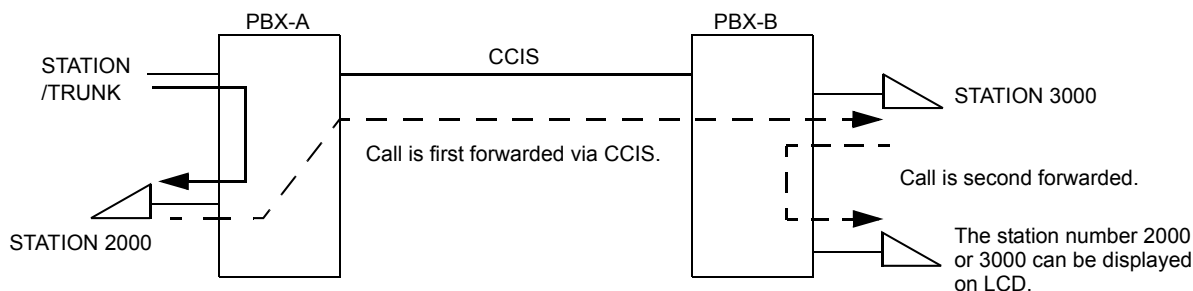


To provide this feature, do the following programming.

- On the forwarded destination side PBX (PBX-B)

START	DESCRIPTION	DATA
CM12	Assign Service Restriction Class C to the required stations.	<ul style="list-style-type: none"> • Y=07 (1) X-XXXXXXXX: Station No. (2) XX: 00-15◀: Service Restriction Class C
END		

When a call is forwarded twice, this feature enables to display the first forwarding station number via CCIS or the second forwarding station number of own office on LCD of the forwarding destination Multiline Terminal.



- On the forwarded destination side PBX (PBX-B)

START	DESCRIPTION	DATA
CM08	Specify to display the first forwarding station number via CCIS or the second forwarding station number of own office on LCD of forwarding destination Multiline Terminal.	(1) 564 (2) 0 : The first forwarding number via CCIS 1◀: The second forwarding number of own office
END		

NOTE: In the case of not forwarding via CCIS, the number to be displayed on LCD is always forwarding number of own office, regardless of setting 2nd data=0.

Operating Procedure

Single-Line Telephone

To set a Call Forwarding-No Answer-CCIS from a Single-Line Telephone:

1. Lift the handset and receive dial tone.
2. Dial the Call Forwarding-No Answer feature access code and receive Feature Dial Tone.
3. Dial the outgoing trunk access code and receive a single burst of Service Set Tone.
(This operation is required for a network using Open Numbering Plan.)
4. Dial the desired target station number and receive Service Set Tone.
5. Wait approximately five seconds and receive Service Set Tone.

To cancel a Call Forwarding-No Answer-CCIS from a Single-Line Telephone:

1. Lift the handset and receive dial tone.
2. Dial Call Forwarding-No Answer cancellation code and receive Service Set Tone.

Attendant Console

To set a Call Forwarding-No Answer-CCIS from an Attendant Console:

1. Press an idle **LOOP** key.
2. Dial the Call Forwarding-No Answer feature access code and receive Feature Dial Tone.
3. Dial the originating station number.
4. Dial the outgoing trunk access code and receive a single burst of Service Set Tone.
(This operation is required for a network using Open Numbering Plan.)
5. Dial the desired target station number and receive Service Set Tone.
6. Press the **RELEASE** key.

To cancel a Call Forwarding-No Answer-CCIS from an Attendant Console:

1. Press an idle **LOOP** key.
2. Dial the Call Forwarding-No answer cancellation code and receive Feature Dial Tone.
3. Dial the originating station number and receive Service Set Tone.
4. Press the **LOOP** key.

NOTE: *The Attendant Console can only set/cancel Call Forwarding-No Answer for stations within the local system in which the Attendant Console resides.*

Multiline Terminal

To set a Call Forwarding-No Answer-CCIS from a Multiline Terminal:

1. Lift the handset or press the **Speaker** key and receive dial tone.
2. Press the Call Forwarding-No Answer feature key and receive Feature Dial Tone.
3. Dial the outgoing trunk access code and receive a single burst of Service Set Tone.
(This operation is required for a network using Open Numbering Plan.)
4. Dial the desired target station number and receive Service Set Tone.
5. Wait approximately five seconds and receive Service Set Tone. The LED lights. The LCD shows:

SET XXXX
(TIME DISPLAY)

Forwarding station number
is displayed.

6. Replace the handset or press the **Speaker** key.

To cancel a Call Forwarding-No Answer-CCIS from a Multiline Terminal:

1. Lift the handset or press the **Speaker** key and receive dial tone.
2. Press the Call Forwarding-No Answer feature key. The LCD shows:

CF NANS YYY
(TIME DISPLAY)

3. Dial “*” and receive Service Set Tone. The LED of the associated feature key will go out. The LCD shows:

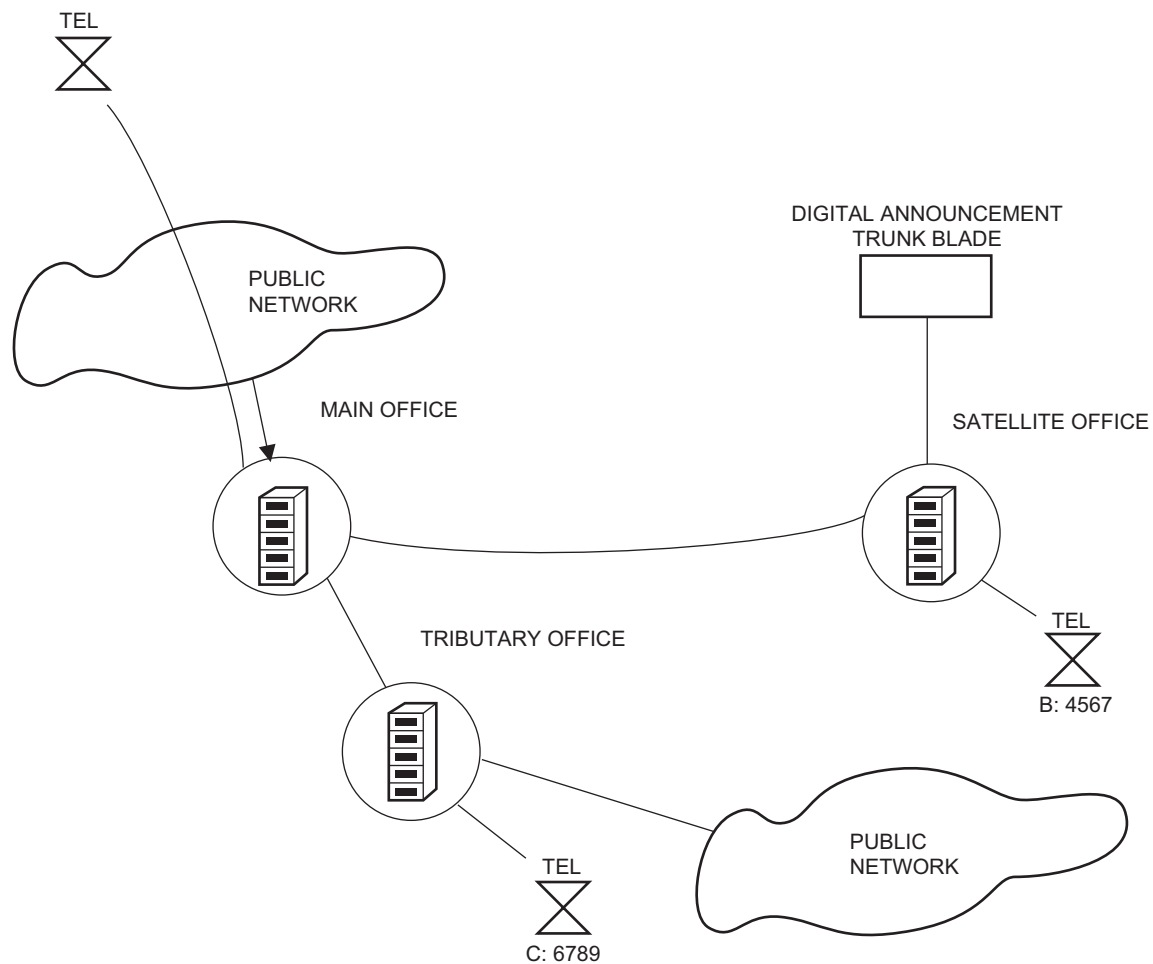
CANCEL
(TIME DISPLAY)

4. Replace the handset or press the **Speaker** key.

CALL FORWARDING-INTERCEPT-CCIS

General Description

This feature allows calls to an inoperative number, through a CCIS trunk, to be intercepted and automatically routed to a recorded announcement informing the caller that an inoperative number was dialed and giving the Listed Directory Number for information.



Programming

START	DESCRIPTION	DATA
CM12	Assign Service Restriction Class A to the required stations. (For Intercept Announcement only.)	<ul style="list-style-type: none"> Y=02 (1) X-XXXXXXX: Station No. (2) XX ZZ XX: 00-15◀: Service Restriction Class A
CM15	Allow Voice Response System access in Service Restriction Class A assigned by CM12 Y=02. (For Intercept Announcement only.)	<ul style="list-style-type: none"> Y=033 (1) 00-15: Service Restriction Class A assigned by CM12 Y=02 (2) 1◀: Allow
CM49	Set the function to each Voice Response System accommodated into the system. (For Intercept Announcement only.)	<ul style="list-style-type: none"> Y=00 (1) 000-015: VRS No. (2) 0A00: Call Forwarding-Intercept Announcement
CM51	Assign a destination for the intercepted call for each tenant.	<ul style="list-style-type: none"> Y=07 (1) 00-63: Tenant No. (2) EB000-EB015 : Voice Response System No. X-XXXXXXXX: Station No. E000 : Attendant Console
CM20	To record, replay, or delete a message, assign the appropriate Voice Response System Blade access codes. (For Intercept Announcement only.)	<ul style="list-style-type: none"> Y=0-3 Numbering Plan Group 0-3 (1) X-XXXX: Access Code (2) A100: Voice Response System access (Record) A101: Voice Response System access (Replay) A102: Voice Response System access (Delete)
END		

Operating Procedure

No manual operation is required once this feature has been programmed in system data.

CALL FORWARDING-OVERRIDE-CCIS

General Description

This feature allows a target station user (Station A) to call a station (Station B) which has Call Forwarding-All Calls-CCIS set.

Programming

START	DESCRIPTION	DATA
<div>CM08</div>	Assign Call Forwarding-Override-CCIS.	(1) 371 (2) 0 : Not available (BT connection) 1◀: Available
END		

Operating Procedure

No manual operation is required.

CALL TRANSFER-ALL CALLS-CCIS

General Description

This feature allows a station user to transfer incoming or outgoing Central Office, intra-office and inter-office calls to another station in the CCIS network, without Attendant assistance.

Programming

START	DESCRIPTION	DATA
CM12	Assign Service Restriction Class A to the required stations.	<ul style="list-style-type: none"> Y=02 (1) X-XXXXXXXX: Station No. (2) XX ZZ XX: 00-15◀: Service Restriction Class A
CM15	Allow Trunk-to-Trunk Transfer in Service Restriction Class A assigned by CM12 Y=02.	<ul style="list-style-type: none"> Y=022 (1) 00-15: Service Restriction Class A assigned by CM12 Y=02 (2) 1◀: Allow
CM12	Assign Service Restriction Class C to the required stations.	<ul style="list-style-type: none"> Y=07 (1) X-XXXXXXXX: Station No. (2) XX: 00-15◀: Service Restriction Class C
CM15	Allow switch hook flash capability during C.O. line connection in Service Restriction Class C assigned by CM12 Y=07.	<ul style="list-style-type: none"> Y=090, 091 (1) 00-15: Service Restriction Class C assigned by CM12 Y=07 (2) 1◀: Allow
CM36	Specify the combination of Trunk Routes allowing a Trunk-to-Trunk (CCIS) Connection.	<ul style="list-style-type: none"> Y=0 (1) XX ZZ XX: 00-63: Incoming Trunk Route ZZ : 00-63: Outgoing Trunk Route (2) 0 : Allow 1◀: Restricted
A	<p>NOTE: When using Line Reconnect-CCIS, allow the Trunk-to-Trunk (CCIS) connection between same routes.</p>	

A	DESCRIPTION	DATA
CM08	Specify Call Transfer from a station before a called station answers.	(1) 062 (2) 0 : Not available 1◀: Available
	When a station that has a C.O./Tie line call (via TRK-A) on Consultation Hold is talking with an another C.O./Tie line call (via TRK-B), specify the system operation after the C.O./Tie line call (via TRK-B) is completed.	(1) 534 (2) 0 : Return to the original call (via TRK-A) 1◀: ROT
	When the call is connected between a C.O./Tie line call (via TRK-A) and an another C.O./Tie line call (via TRK-B), allow the Trunk-to-Trunk transfer by station or attendant.	(1) 028 (2) 0: Allow
	Specify the operation of Recall key when a station receives SPDT after hooking.	(1) 1000 (2) 0 : Recall key is not available 1◀: Return to the original call
	END	

NOTE: See also the programming for “Trunk-to-Trunk Connection” in the “Programming Manual”, when no release signal arrives from the incoming trunk route.

Operating Procedure

To transfer a call in progress from a Single-Line Telephone:

1. Press the hookswitch momentarily and receive Feature Dial Tone.
2. Dial the third party and receive ringback tone.
3. Wait for the third party to answer and announce the transfer while keeping the first party on Consultation Hold-All Calls-CCIS. When the station user hangs up, the first and third parties will be automatically connected.

To transfer a call in progress from a Multiline Terminal:

1. Press the **Transfer** key and receive Feature Dial Tone.
2. Dial the third party and receive ringback tone.
3. Wait for the third party to answer and announce the transfer while keeping the first party on Consultation Hold-All Calls-CCIS. When the station user hangs up, the first and third parties will be automatically connected.

CALL TRANSFER-ATTENDANT-CCIS

General Description

This feature permits a station user, while connected to a CCIS network call, to transfer a call to an Attendant Console via the CCIS network.

Programming

START	DESCRIPTION	DATA
CM12	Assign Service Restriction Class A to the required stations.	<ul style="list-style-type: none"> Y=02 (1) X-XXXXXXXX: Station No. (2) XX ZZ XX: 00-15◀: Service Restriction Class A
CM15	Allow Trunk-to-Trunk Transfer in Service Restriction Class A assigned by CM12 Y=02.	<ul style="list-style-type: none"> Y=022 (1) 00-15: Service Restriction Class A assigned by CM12 Y=02 (2) 1◀: Allow
CM12	Assign Service Restriction Class C to the required stations.	<ul style="list-style-type: none"> Y=07 (1) X-XXXXXXXX: Station No. (2) XX: 00-15◀: Service Restriction Class C
CM15	Allow switch hook flash capability during C.O. line connection in Service Restriction Class C assigned by CM12 Y=07.	<ul style="list-style-type: none"> Y=090, 091 (1) 00-15: Service Restriction Class C assigned by CM12 Y=07 (2) 1◀: Allow
CM36	Specify the combination of Trunk Routes allowing a Trunk-to-Trunk (CCIS) Connection. The incoming Trunk Route must provide a release signal for this feature. (See CM35 Y=05 in the Command Manual)	<ul style="list-style-type: none"> Y=0 (1) XX ZZ XX: 00-63: Incoming Trunk Route ZZ: 00-63: Outgoing Trunk Route (2) 0 : Allow 1◀: Restricted
CM08	Specify Call Transfer from a station before the called attendant answers.	<ul style="list-style-type: none"> (1) 063 (2) 0 : Available 1◀: Not available
END		

NOTE 1: In the Inter-Tenant Connection Assignment, the Tenant number should be assigned as 01-63. 00 should not be used if connecting to a PBX.

NOTE 2: Refer to Numbering Plan Assignment and assign a dial code to call the attendant by the LCR feature.

Operating Procedure

To transfer a call to an Attendant Console:

1. While engaged in a Central Office trunk call, press the hookswitch momentarily and receive Feature Dial Tone.
2. Dial the operator access code.
3. The **ATND** lamp on the Attendant Console flashes and the buzzer sounds. The station receives ringback tone.

To answer from the Attendant Console:

1. Refer to the Attendant Console User's Guide.

If the station wishes to return to the Central Office trunk call while the Attendant Console is being called:

2. Press the hookswitch momentarily. The **ATND** lamp on the Attendant Console goes out and the buzzer stops.
3. Ringback tone ceases and the station returns to the Central Office trunk call.

CALLING NAME DISPLAY-CCIS

General Description

This feature permits the station name of a calling or called party at another switching office, through the CCIS network, to be displayed either on a Multiline Terminal or an Attendant Console.

Programming

START	DESCRIPTION	DATA
CM08	Specify the number of digits sent to the CCIS network to 24 digits.	(1) 379 (2) 1◀: 24 digits
	Specify the time to go back to date and time display after the call is answered.	(1) 120 (2) 0 : 10 seconds later 1◀: 6 seconds later
	Specify the duration to display the name.	(1) 121 (2) 0 : Until call finished 1◀: As per CM08>120
	Specify the duration of displaying the caller information when the incoming/outgoing call is answered by the destination via CCIS.	(1) 580 (2) 0 : 6 seconds 1◀: Until call is finished
CM20	Assign the access code for station user name entry from an individual station.	<ul style="list-style-type: none"> Y=0-3 Numbering Plan Group 0-3 (1) X-XXXX: Access Code (0-9, *, #) (2) A110: Name Display
CM35	Assign a trunk name number to each trunk route.	<ul style="list-style-type: none"> Y=003 (1) 00-63: Trunk Route No. (2) 00-14: Trunk Name No. 15 : Kind of trunk route assigned by CM35 Y=000 are displayed 16-63: Trunk Name No.
CMA7	Provide each CCH number with Name Display feature.	<ul style="list-style-type: none"> Y=26 Name Display (1) 00-63: CCH No. (2) 1◀: To provide
A		

A	DESCRIPTION	DATA
CM77	Enter the desired user's name to each station number with Character Codes or characters.	<ul style="list-style-type: none"> • Y=0 By Character Code (1) X-XXXXXXXX: Station No. assigned by CM10/Virtual station No. assigned by CM11 (2) 20-7F: Character Code Maximum 32 digits (See CM77 in the Command Manual) NONE◀: No data
	Assign the desired trunk route name to each trunk route by CM77 Y=2 or Y=3.	<ul style="list-style-type: none"> • Y=1 By Character (1) X-XXXXXXXX: Station No. assigned by CM10/Virtual station No. assigned by CM11 (2) A-Z, 0-9 : Character Maximum 16 characters NONE◀: No data
		<ul style="list-style-type: none"> • Y=2 By Character Code (1) 00-63: Trunk Route Name No. assigned by CM35 Y=003. (2) 20-7F: Character Code (See CM77 in the Command Manual) NONE◀: No data • Y=3 By Character (1) 00-63: Trunk Route Name No. assigned by CM35 Y=003. (2) A-Z, 0-9 : Character Maximum 4 characters NONE◀: No data
END		

NOTE 1: The maximum number of stations that can be provided with user's name display is 384.
The maximum number of characters per name is eight, including spaces.

NOTE 2: User's name can be assigned to Single Line Telephones, but cannot be assigned to the Attendant Console.

NOTE 3: The trunk name display is provided on a trunk route basis. The maximum amount of characters in the trunk name display is four. And the maximum number of trunk routes assignable is 16.

NOTE 4: There are two ways to change a name that currently programmed. By overwriting with a new name or by inserting a blank space as the first character will cancel the existing name.

Operating Procedure

No manual operation is required.

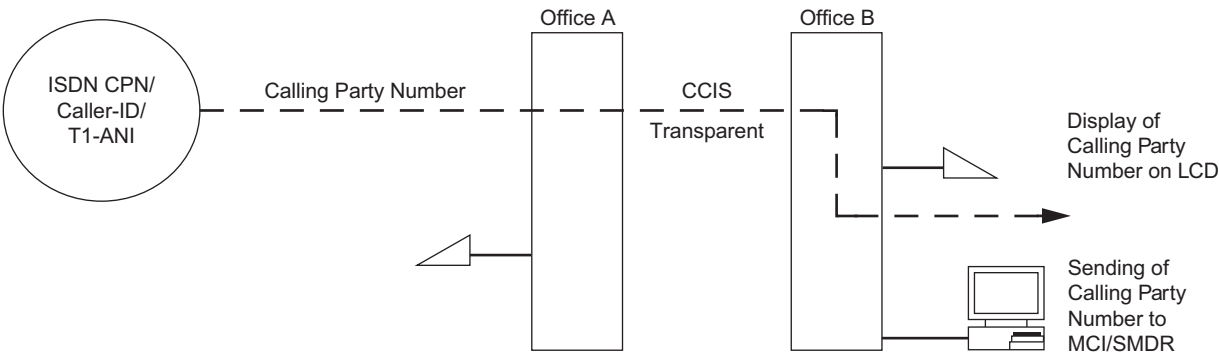
CALLING NUMBER DISPLAY-CCIS

General Description

This feature permits the number of a calling or called party at another switching office to be displayed either on a Multiline Terminal or an Attendant Console.

To transfer the calling party number received from the network (ISDN CPN/Caller-ID/T1-ANI) transparently between the offices on the CCIS network, assign the following data.

The calling party number sent from the network over CCIS can be displayed on the LCD of the station of another office over CCIS, and can be sent to the SMDR. It can also be sent to the MCI, if the system provides the MCI with ANI.



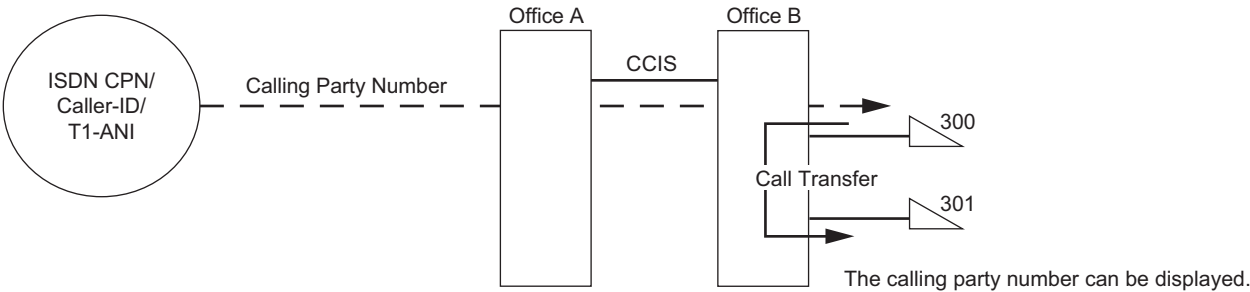
Programming

START	DESCRIPTION	DATA
CM08	Provide the system with Caller ID Display feature for CCIS calls for Office A and B.	(1) 379 (2) 1◀: To provide
	Specify the duration of displaying the caller information when the incoming/outgoing call is answered by the destination via CCIS.	(1) 580 (2) 0 : 6 seconds 1◀: Until call is finished
A		

	DESCRIPTION	DATA
A CMA7	Provide each CCH number with Name Display-CCIS feature for Office A and B.	<ul style="list-style-type: none">Y=26(1) 00-63: CCH No.(2) 1◀: To provide
	Provide the CCH number with Calling Party Information transferring service for Office A and B.	<ul style="list-style-type: none">Y=28(1) 00-63: CCH No.(2) 1◀: To provide
CM08	Provide the sending of calling station number or calling party number to the analog telephone for Caller ID-Station when an incoming call is terminated via CCIS.	<ul style="list-style-type: none">(1) 603(2) 0: To provide
END	<p>NOTE: <i>The sending of a calling station number to the analog telephone for Caller ID-Station is effective when CM08>507 is set to 1.</i></p>	

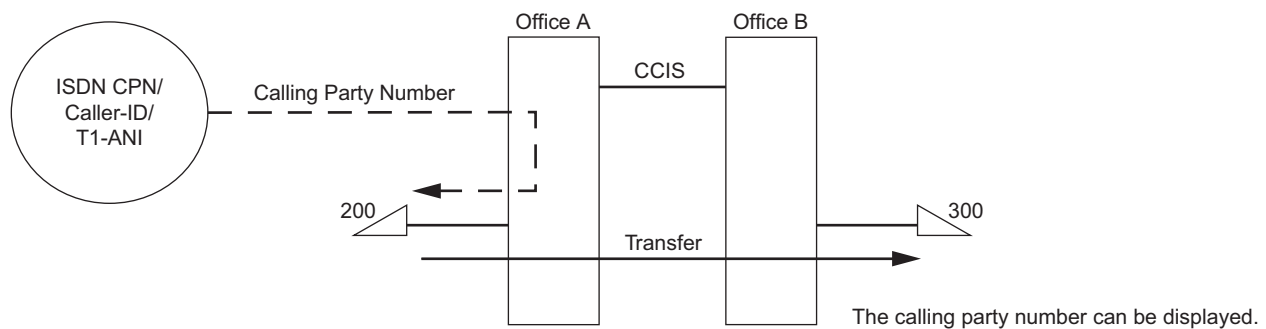
The conditions for transferring calling party number over CCIS related to the Call Transfer, Call Forwarding feature are described below.

When the Station 300 on the Office B answers the call from the network and transfers the call to the Station 301 on the Office B, the calling party number will be displayed on the Station 301.

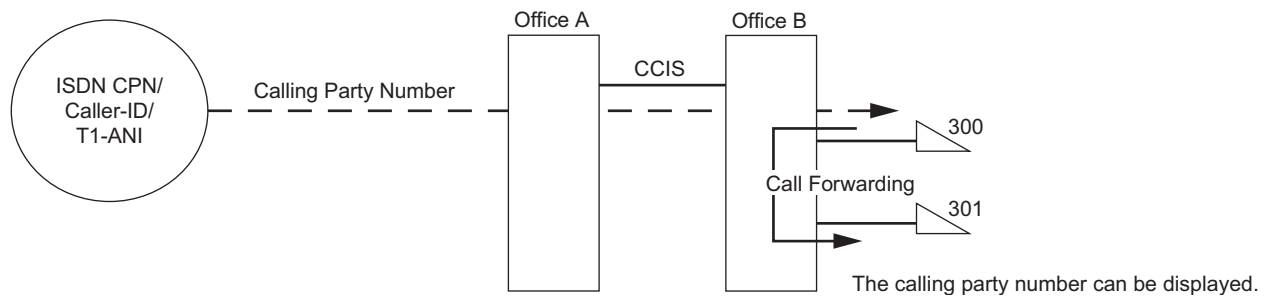


Continued on next page

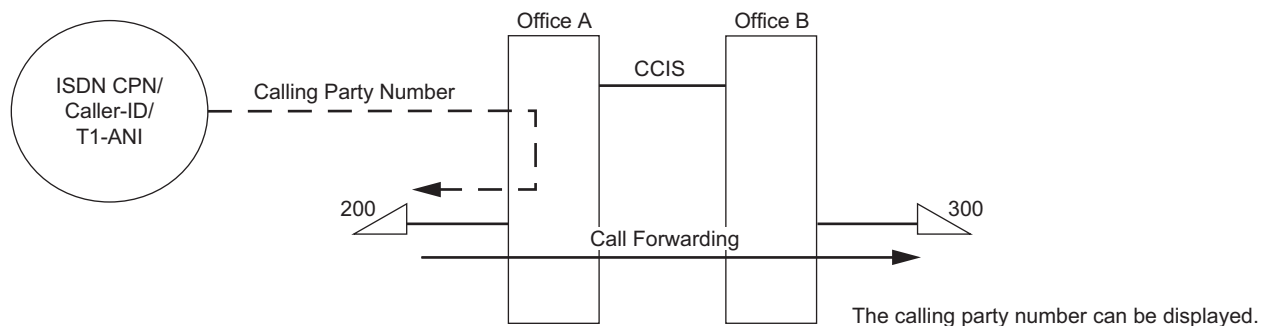
When the Station 200 on the Office A answers the call from the network and transfers the call to the Station 300 on the Office B, the calling party number will be displayed on the Station 300.



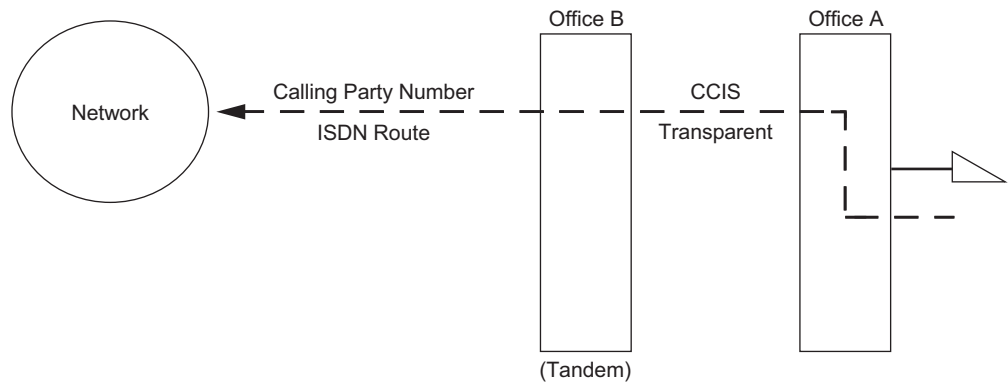
When the call from the network terminates to the Station 300 on the Office B and be forwarded to the Station 301 on the Office B, the calling party number will be displayed on the Station 301.



When the call from the network terminates to the Station 200 on the Office A and be forwarded to the Station 300 on Office B, the calling party number will be displayed on the Station 300.



To transmit a calling party number to the ISDN route over CCIS tandem connection:



- For Calling Party Side Office (Office A)

START	DESCRIPTION	DATA
CM12	Assign the calling party number sent to the network. “*” , “#” are not available for the sending number. Assign the Local Office Code Table number.	<ul style="list-style-type: none">• Y=12(1) X-XXXXXXXX: Station No.(2) X-XXXX: Sending No.
CM50	Assign the Local Office Code sent to the network. “*” , “#” is not available for the sending number.	<ul style="list-style-type: none">• Y=13(1) X-XXXXXXXX: Station No.(2) 00-14: Local Office Code Table No. 00-14 <ul style="list-style-type: none">• Y=05(1) 00-14: Local Office Code Table No. 00-14(2) X-XXX...: Local Office Code (Maximum 12 digits)
A		

	DESCRIPTION	DATA
A		
CM20	Assign the LCR data for CCIS calls.	See "Least Cost Routing-3/6 digit" in the Programming Manual.
CM81	This feature is available only when the calling party calls to CCIS route by the LCR.	
CM8A		
CM85		
CM35		
CM8A		
CM8A	Add the calling party number for ISDN calls via CCIS route.	<ul style="list-style-type: none">Y=5000-5255LCR Pattern No. 000-255(1) 165: Caller ID of outgoing call by CCIS(2) 0: To add
CM08	Provide the system with Caller ID Display feature for CCIS calls.	<ul style="list-style-type: none">(1) 379(2) 1◀: To provide
CMA7	Provide each CCH number with Name Display-CCIS feature.	<ul style="list-style-type: none">Y=26(1) 00-63: CCH No.(2) 1◀: To provide
	Provide the CCH number with Calling Party Information transferring service.	<ul style="list-style-type: none">Y=28(1) 00-63: CCH No.(2) 1◀: To provide
END		

- For Tandem Office (Office B)

START	DESCRIPTION	DATA
CM08	Provide the system with Caller ID Display feature for CCIS calls.	(1) 379 (2) 1◀: To provide
CMA7	Provide each CCH number with Name Display-CCIS feature.	• Y=26 (1) 00-63: CCH No. (2) 1◀: To provide
	Provide the CCH number with Calling Party Information transferring service.	• Y=28 (1) 00-63: CCH No. (2) 1◀: To provide
CM35	Provide the Calling Party Information transferring service to the ISDN route.	• Y=145 (1) 00-63: Trunk Route No. (2) 0: To provide
END		

Operating Procedure

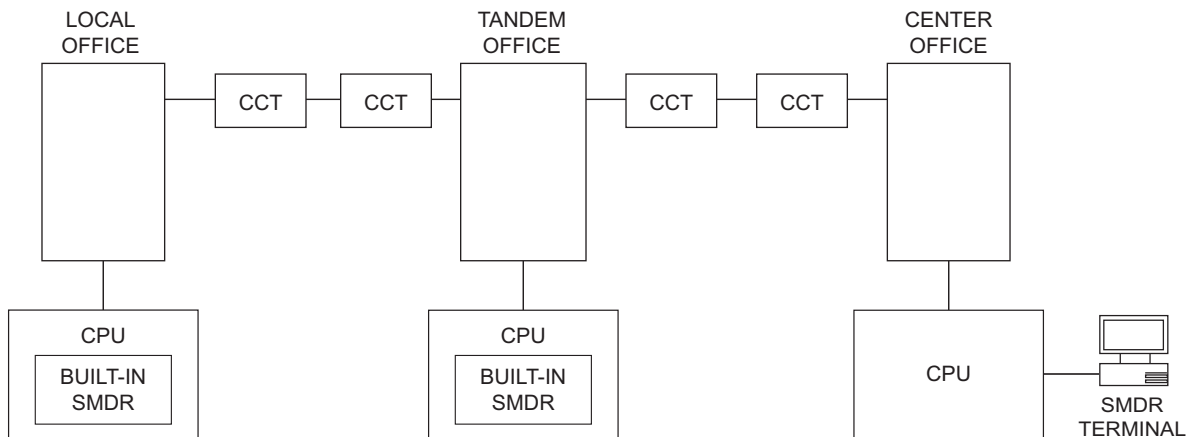
No manual operation is required.

CENTRALIZED BILLING-CCIS

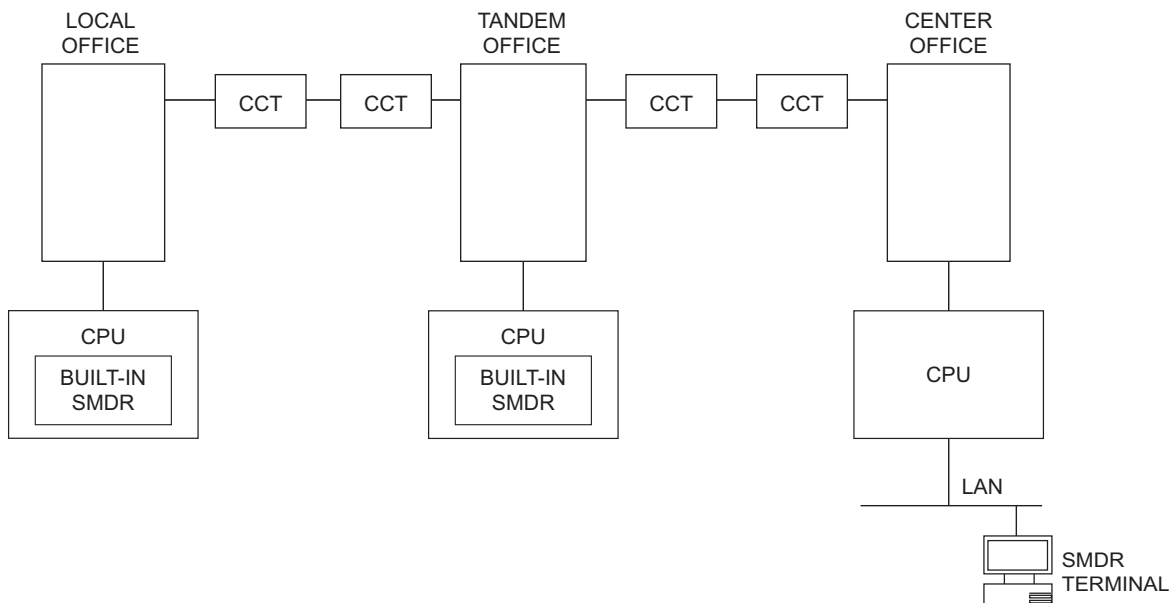
General Description

This feature is used to collect billing information from each office within the network and to direct it to the associated center office. Billing information is then forwarded to the central billing center via RS-232C interface or LAN interface.

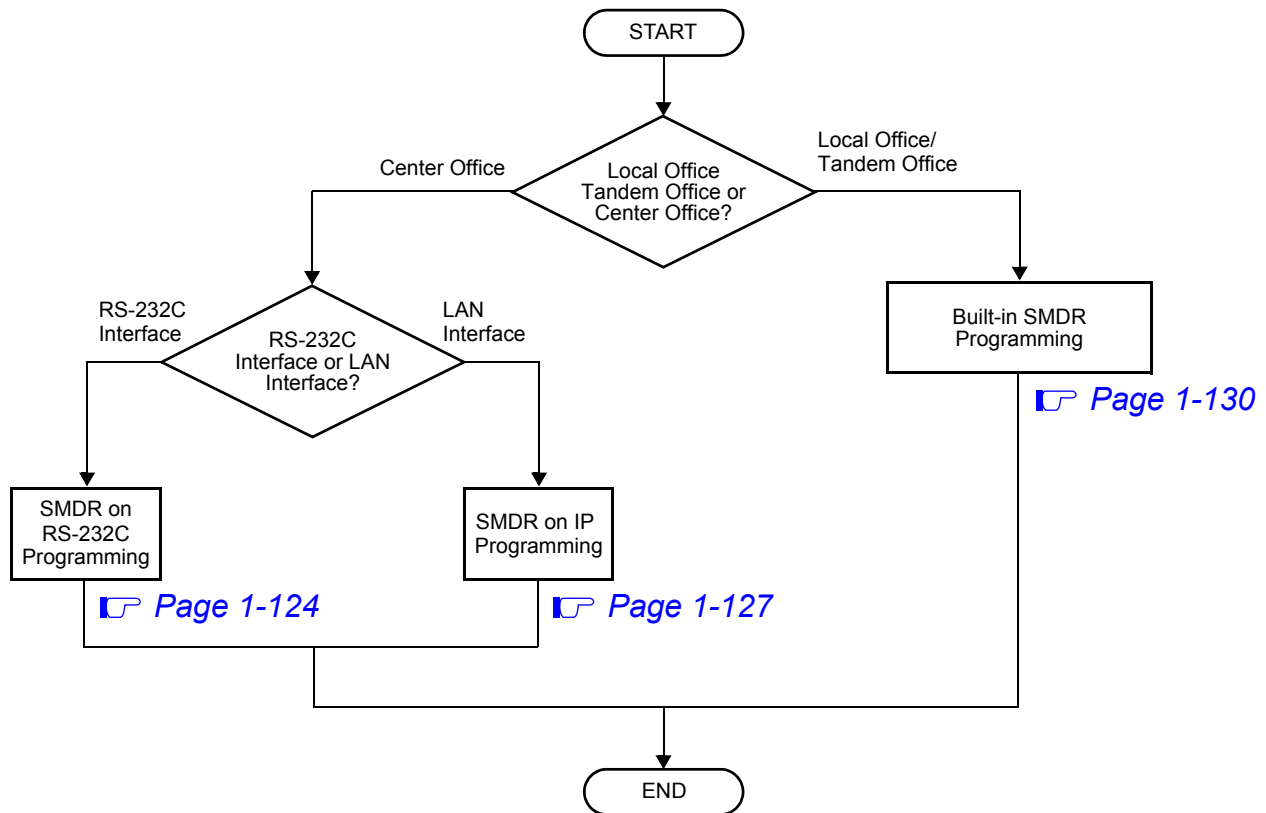
- SMDR on RS-232C connection



- SMDR on IP connection

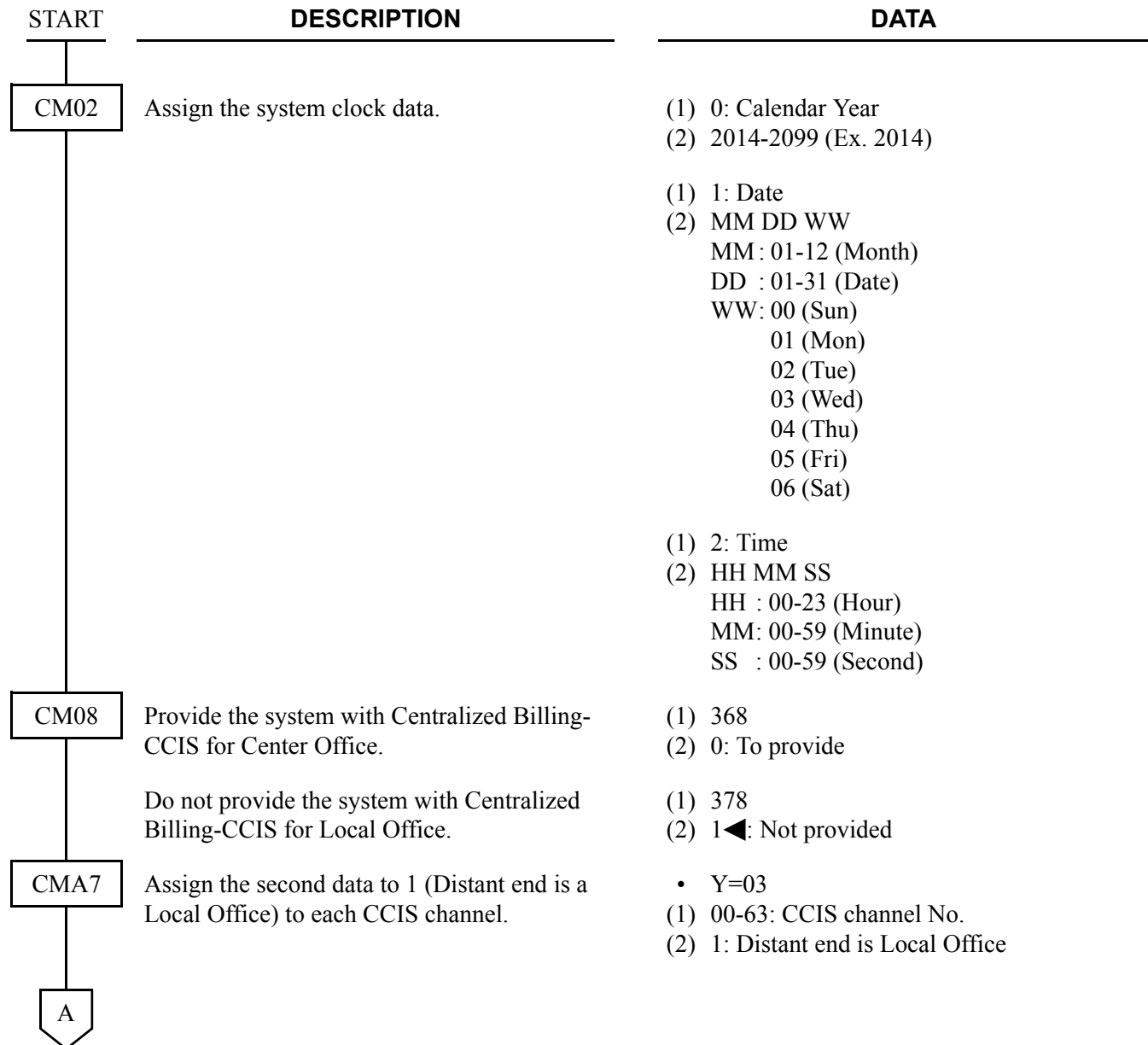


Programming Summary



SMDR on RS-232C Programming

To send a billing information of center office to SMDR terminal via RS-232C interface, do the SMDR on RS-232C Programming. For details of the programming, refer to Station Message Detail Recording (SMDR) of Programming Manual.

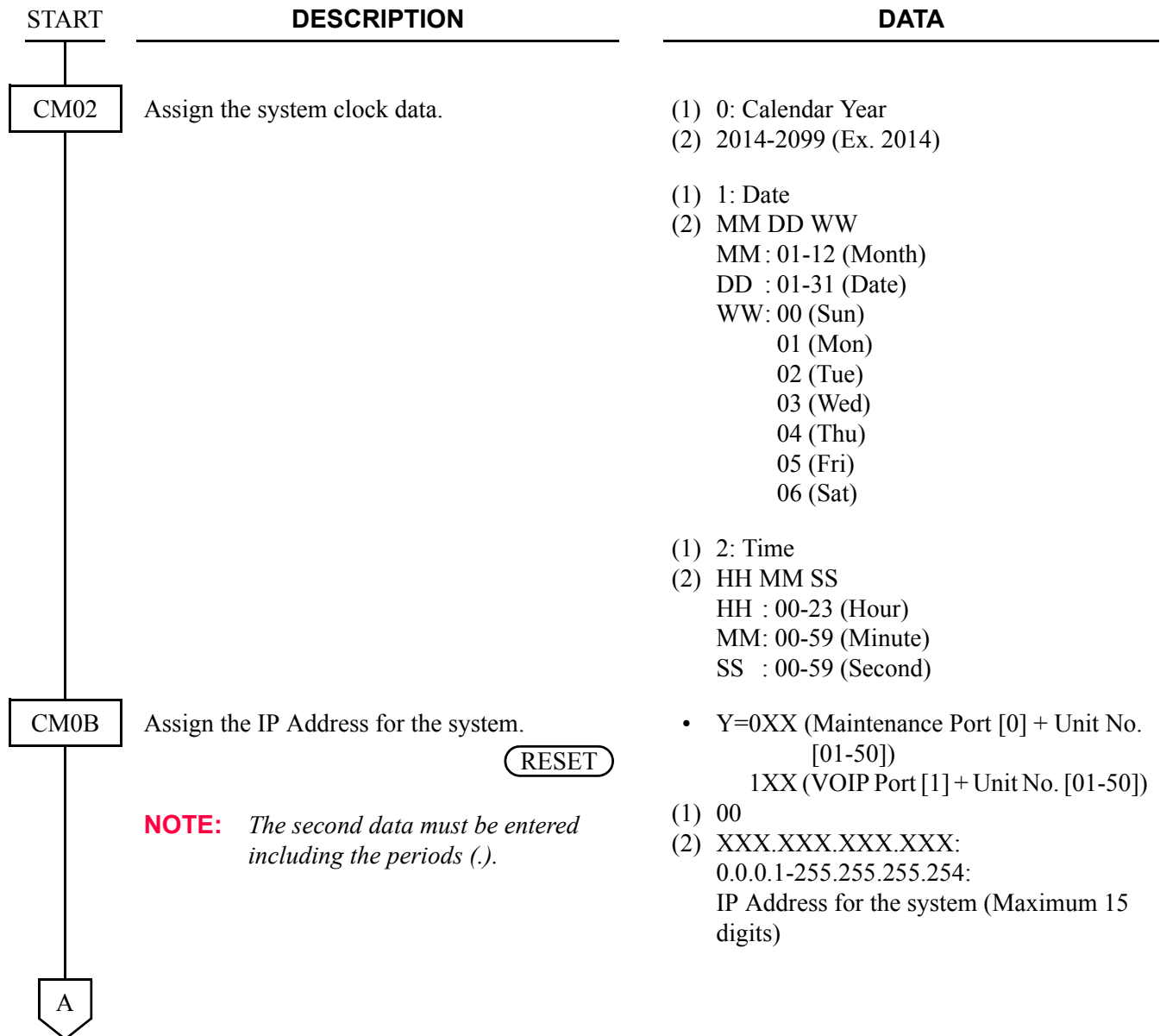


A	DESCRIPTION	DATA
CM04	Specify the SMDR Message Format of billing information for SMDR.	<ul style="list-style-type: none"> Y=01 (1) 07 (2) 00 : Extended NEAX 2400 IMS Format 15◀: Former NEAX 2400 IMS Format
	Provide the destination to send a billing information which received from Local Office.	<ul style="list-style-type: none"> (1) 06 (2) 1: RS port (To output to RS1/RS2 port set by CM40 Y=00>0)
CM40	Set the interface conditions for built-in SMDR to the CPU blade RS port.	<ul style="list-style-type: none"> Y=00 (1) 0 (Unit01 Port 1) 1 (Unit01 Port 2) (2) 14: Built-in SMDR
	NOTE: Only Unit01 can be assigned for built-in SMDR.	
	To change the interface condition of each port set by CM40 Y=00, assign the attribute data, according to the SMDR terminal specifications.	<ul style="list-style-type: none"> Y=01 (Data Length) <ul style="list-style-type: none"> (1) 0 (Unit01 Port 1) 1 (Unit01 Port 2) (2) 0 : 7 bits 1◀: 8 bits Y=02 (Parity Check) <ul style="list-style-type: none"> (1) 0 (Unit01 Port 1) 1 (Unit01 Port 2) (2) 0 : Effective 1◀: Ineffective Y=03 (Kind of Parity) <ul style="list-style-type: none"> (1) 0 (Unit01 Port 1) 1 (Unit01 Port 2) (2) 0 : Odd Parity 1◀: Even Parity Y=04 (Stop Bit) <ul style="list-style-type: none"> (1) 0 (Unit01 Port 1) 1 (Unit01 Port 2) (2) 0 : 1-Stop bit 1◀: 2-Stop bit Y=05 (DTR Signal) <ul style="list-style-type: none"> (1) 0 (Unit01 Port 1) 1 (Unit01 Port 2) (2) 0 : Low 1◀: High
B		

	DESCRIPTION	DATA
<div>B</div> <div>CM40</div> <div>END</div>		<ul style="list-style-type: none"> Y=06 (RTS Signal) <ul style="list-style-type: none"> (1) 0 (Unit01 Port 1) 1 (Unit01 Port 2) (2) 0 : Low 1 ◀: High Y=08 (Data Speed) <ul style="list-style-type: none"> (1) 0 (Unit01 Port 1) 1 (Unit01 Port 2) (2) 1 : 1200 bps 2 : 2400 bps 3 : 4800 bps 4 : 9600 bps 5 : 19200 bps NONE◀: 9600 bps

SMDR on IP Programming

To send a billing information of center office to SMDR terminal via LAN interface, do the programming of SMDR on IP Programming. For details of the programming, refer to Station Message Detail Recording (SMDR) of Programming Manual.



A	DESCRIPTION	DATA
CM0B	Assign the Subnet Mask for the system.	<ul style="list-style-type: none"> Y=0XX (Maintenance Port [0] + Unit No. [01-50]) 1XX (VOIP Port [1] + Unit No. [01-50]) (1) 01 (2) XXX.XXX.XXX.XXX: 255.0.0.0-255.255.255.252: Subnet Mask for the system (Maximum 15 digits)
	NOTE: The second data must be entered including the periods (.).	
	Assign the Default Gateway Address for the system.	<ul style="list-style-type: none"> Y=0XX (Maintenance Port [0] + Unit No. [01-50]) 1XX (VOIP Port [1] + Unit No. [01-50]) (1) 02 (2) XXX.XXX.XXX.XXX: 0.0.0.1-255.255.255.254: Default Gateway Address for the system (Maximum 15 digits)
CM08	NOTE 1: The second data must be entered including the periods (.).	
	NOTE 2: There are the following conditions when setting the Default Gateway Address by this command. <ul style="list-style-type: none"> Only one Default Gateway Address can be set for the system. Set the Default Gateway Address to the Maintenance port (Y=0XX) when not using VoIPDB. Set the Default Gateway Address to the VOIP port (Y=1XX) when using VoIPDB. 	
B	Select the Port for SMDR.	<ul style="list-style-type: none"> Y=001 (1) 92 (2) 0: Maintenance port 1: VOIP port
	Provide the system with Centralized Billing-CCIS for Center Office.	(1) 368 (2) 0: To provide
	Not provide the system with Centralized Billing-CCIS for Local Office.	(1) 378 (2) 1◀: Not provided

	DESCRIPTION	DATA
B		
CMA7	Assign the second data to 1 (Distant end is a Local Office) to each CCIS channel.	<ul style="list-style-type: none"> Y=03 (1) 00-63: CCIS channel No. (2) 1: Distant end is Local Office
	Assign the billing office number, if required.	<ul style="list-style-type: none"> Y=07 (1) 00-63: CCIS channel No. (2) 0-9999: Billing Office No.
CM04	Provide the destination to send a billing information which received from Local Office.	<ul style="list-style-type: none"> Y=01 (1) 06 (2) 0: SMDR terminal via LAN port
CM08	Specify whether the parity check is provided.	(1) 827 (2) 0 : Not Provided (None parity) 1◀: To provide (Parity as for CM08>828)
	Specify the kind of parity.	(1) 828 (2) 0 : Odd parity 1◀: Even Parity
END		

Built-in SMDR Programming

For local office or tandem office, in addition to the programming of built-in SMDR, do the following programming. For details of the built-in SMDR, refer to Station Message Detail Recording (SMDR) of Programming Manual.

START	DESCRIPTION	DATA				
CM08	Do not provide the system with Centralized Billing-CCIS for Center Office.	(1) 368 (2) 1◀: Not provided				
	Provide the system with Centralized Billing-CCIS for Local Office.	(1) 378 (2) 0: To provide				
	Specify whether the Office number is sent to Center Office for Centralized Billing-CCIS.	(1) 801 (2) 0 : To send 1◀: Not sent				
	NOTE: <i>When the network adopts Open Numbering Plan, set the office number by CMA7 Y=06.</i>					
	Specify the Kind of Center Office for Centralized Billing-CCIS.	(1) 830 (2) 0 : SV8300/SV9300 1◀: 2400 IPX				
CMA7	NOTE: <i>This command is available in following conditions.</i> - <i>Output Message Format of SMDR: NEAX 2400 IMS Extended Format.</i> - <i>Local Office: SV8300/SV9300.</i>					
	Assign the data as follows.	<ul style="list-style-type: none">Y=03				
	<table><tr><td>1st Data</td><td>2nd Data</td></tr><tr><td>CCIS channel No. (0-15) for Center Office</td><td>0</td></tr></table>	1st Data	2nd Data	CCIS channel No. (0-15) for Center Office	0	(1) 00-63: CCIS channel No. (2) 0 : Distant end is Center Office 1 : Distant end is Local Office 3◀: Not provided
	1st Data	2nd Data				
	CCIS channel No. (0-15) for Center Office	0				
See Example 2: Data Assignment of CMA7 Y=03, 04. 📄 Page 1-135						
Assign Centralized Billing destination. See Example 2: Data Assignment of CMA7 Y=03, 04. 📄 Page 1-135	<ul style="list-style-type: none">Y=04 (1) 00-63: CCIS channel No. (2) 00001-16367: Point Code of Center Office.					
A						

A	DESCRIPTION	DATA
CMA7	<p>Assign Originating Office number for Closed Numbering Plan. See Example 3: Data Assignment of CMA7 Y=06. Page 1-136</p> <p>Assign the Center Billing Office number for Closed Numbering Plan, if required.</p>	<ul style="list-style-type: none"> Y=06 (1) 00-63: CCIS channel No. (2) 0-9999: Originating Office No.
CM08	<p>Specify whether the calling party information (Trunk Route No./Station No.) is sent to SMDR on CCIS tandem calls. See Example 1: Data Assignment of SMDR Call Record on a Tandem Call through CCIS. Page 1-133</p>	<ul style="list-style-type: none"> Y=07 (1) 00-63: CCIS channel No. (2) 0-9999: Center Billing Office No. (1) 377 (2) 0 : Station No. and Office No. 1◀: Trunk Route No.
CM65	<p>Specify the station number sent to the 2400 IPX through CCIS for SMDR.</p> <p>NOTE 1: <i>If the Center Office is the 2400 IPX, CM65 Y=26 is required.</i></p> <p>NOTE 2: <i>When setting Name Display to Sub Line, whether to display My Line No./Name or Sub Line No./Name depends on CM08>502. Set this data to the same setting of CM08>502. (ex.) When CM65 Y=26 is set to "0" (My Line No./Name), set CM08>502 to "0" (Name of My Line).</i></p>	<ul style="list-style-type: none"> Y=26 (1) Tenant No. of Stations (2) 0 : My Line No./Name 1◀: Sub Line No./Name
CM13	<p>Provide the SMDR service for outgoing calls to the required station.</p>	<ul style="list-style-type: none"> Y=06 (1) X-XXXXXXXX: Station No. (2) 1◀: To provide
CM35	<p>Provide SMDR service for outgoing calls to the required trunk route.</p>	<ul style="list-style-type: none"> Y=014 (1) 00-63: Trunk Route No. (2) 1◀: To provide
B		

	DESCRIPTION	DATA
<div style="text-align: center;">B</div> <div style="border: 1px solid black; padding: 2px; margin: 5px auto; width: 60px;">CM35</div> <div style="text-align: center;">END</div>	Assign a trunk access code sent to SMDR for outgoing calls.	<ul style="list-style-type: none"> Y=044 (1) 00-63: Trunk Route No. (2) 00-99: Trunk Access Code
	Provide SMDR service for incoming calls to the required trunk routes.	<ul style="list-style-type: none"> Y=049 (1) 00-63: Trunk Route No. (2) 0: To provide

- Built-in SMDR programming for billing information is as follows. For details of the built-in SMDR, refer to Station Message Detail Recording (SMDR) of Programming Manual.

START	DESCRIPTION	DATA
<div style="text-align: center;">CM04</div> <div style="text-align: center;">END</div>	Specify the SRAM billing information which is sent to a destination SMDR terminal.	<ul style="list-style-type: none"> Y=65 (1) 00: Trunk Route No. 01: Station to station call 02: Outgoing trunk call 03: Abandoned outgoing trunk call 04: Incoming trunk call 05: Abandoned incoming trunk call 06: Abandoned incoming trunk call during station is busy 07: Tandem call (2) 0 : Available 1 ◀: Not available

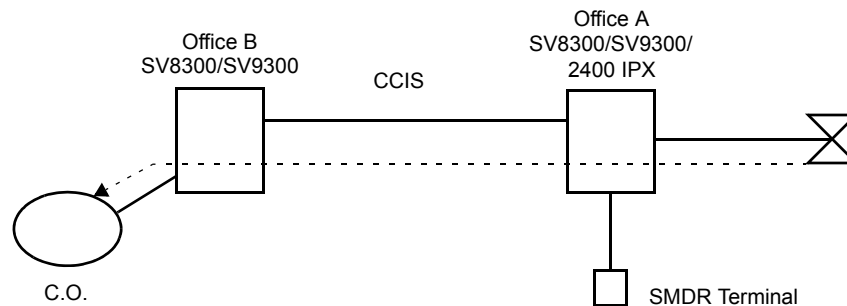
- To clear the SRAM billing information is as follows.

START	DESCRIPTION	DATA
<div style="border: 1px solid black; padding: 2px; margin: 5px auto; width: 60px;">CM04</div> <div style="text-align: center;">END</div>	Clear the SRAM billing information which is sent to a destination SMDR terminal.	<ul style="list-style-type: none"> Y=65 (1) 99 (2) CCC

Example of the programming

Example 1: Data Assignment of SMDR Call Record on a Tandem Call through CCIS

To provide one SMDR call record showing the office number and the station that made the call in Office A.



Data Assignment of Office B

CM08>040: 1 (Provides SMDR service for tandem calls)

CM08>377: 0 (Provides office number and station number from the tandem office)

CM35 Y=014>C.O. Route No.: 1 (To provide)

Data Assignment of Office A

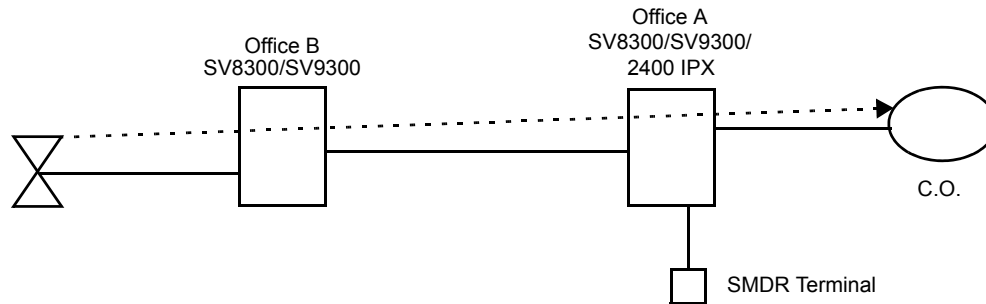
CM35 Y=014>CCIS Route No.: 0 (Not provided)

CMA7 Y=06>CCH No.: 0000-9999 (Originating Office Number)

Data Assignment of Office A

ARTD CDN 10>CCIS Route No.: 0

To provide Tandem Centralized Billing in the Local Office



Data Assignment of Office A

CM08>040: 1 (Provides SMDR service for tandem calls)

CM08>377: 0 (Provides office number and station number from the tandem office)

CM35 Y=014>C.O. Route No.: 0 (Not provided)

Data Assignment of Office A

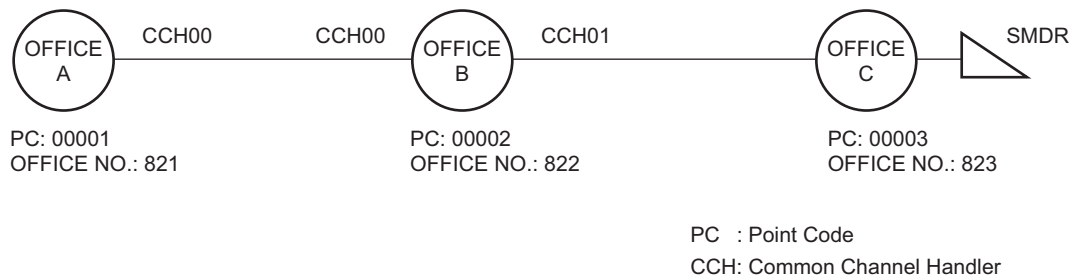
ARTD CDN 10>CCIS Route No.: 0

ARTD CDN 16>CCIS Route No.: 0

Data Assignment of Office B

CM08>378: 1 (Not provided)

Example 2: Data Assignment of CMA7 Y=03, 04



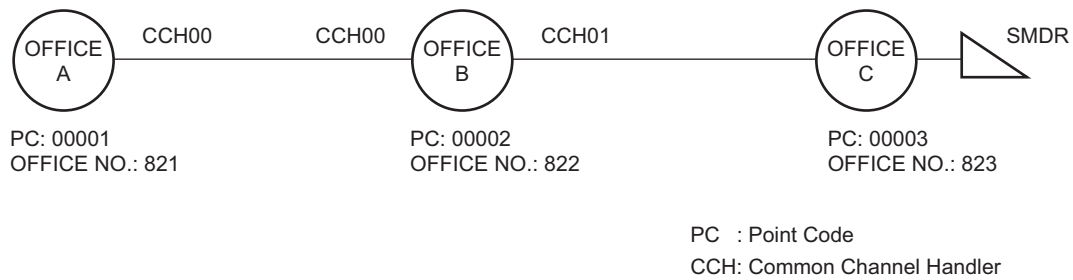
• Data Assignment of Office A

Command Code	1st Data	2nd Data	Remarks
CMA7 Y=03	00	0	To Center Office
CMA7 Y=04	00	00003	

• Data Assignment of Office B

Command Code	1st Data	2nd Data	Remarks
CMA7 Y=03	00	1	To Local Office
CMA7 Y=04	00	00003	
CMA7 Y=03	01	0	To Center Office
CMA7 Y=04	01	00003	

Example 3: Data Assignment of CMA7 Y=06



- Data Assignment of Office A

Command Code	1st Data	2nd Data	Remarks
CMA7 Y=06	00	821	

- Data Assignment of Office B

Command Code	1st Data	2nd Data	Remarks
CMA7 Y=06	00	822	
CMA7 Y=06	01	822	

Operating Procedure

No manual operation is required. The call record outputs are produced automatically.

CENTRALIZED DAY/NIGHT MODE CHANGE-CCIS

General Description

This feature switches the Day/Night Mode of a remote office, linked to the main office (2400 IPX) via CCIS, in accordance with the Day/Night Mode switching on the Attendant Console at the main office.



- For Satellite Office

If the Attendant Console is required in the Satellite Office, the following programming is required.

START	DESCRIPTION	DATA
CM60	Assign as ineffective Trunk Restriction Class change by NT (Night) switch on DESKCON. NOTE: <i>A reset by CM60 Y=90>0: 0 is required after this data setting.</i>	<ul style="list-style-type: none"> • Y=02 (1) 0-7: DESKCON No. (2) 1◀: Ineffective
	Assign as ineffective outgoing call restriction on Night Mode by NT switch on DESKCON. NOTE: <i>A reset by CM60 Y=90>0: 0 is required after this data setting.</i>	<ul style="list-style-type: none"> • Y=04 (1) 0-7: DESKCON No. (2) 1◀: Ineffective
	Assign as ineffective Day/Night Mode Change by NT switch on DESKCON. NOTE: <i>A reset by CM60 Y=90>0: 0 is required after this data setting.</i>	<ul style="list-style-type: none"> • Y=06 (1) 0-7: DESKCON No. (2) 1◀: Ineffective
END		

To provide an indication on external equipment when Day/Night Mode status is changed by the Attendant Console at the Main Office, do the following programming.

START	DESCRIPTION	DATA
CM05	Assign a Unit and Slot number to the DLC blade. BLADE RESET NOTE: <i>When the PGD(2)-U10 ADP is accommodated to the Remote Unit, execute the system data copy by CMEC Y=8 before executing the blade reset.</i>	<ul style="list-style-type: none"> Y=0 (1) XX ZZ XX: 01-50: Unit No. ZZ : 01-18: Slot No. (2) 10: DLC blade
CM10	Assign the station number connected to PGD(2)-U10 ADP to its associated Physical Port number.	<ul style="list-style-type: none"> Y=00 (1) XX YY ZZ: Physical Port No. XX: 01-50: Unit No. YY: 01-18: Slot No. ZZ : 01-32: Circuit No. (2) X-XXXXXXXX: Station No.
CM12	Assign the Kind of PGD(2)-U10 station. NOTE 1: <i>Set the second data to "1" when combining external relay with paging. Set the second data to "3" only when using this feature.</i> NOTE 2: <i>When this command is set, PGD(2)-U10 needs to reset (Blade Reset or pull out and reconnect the modular connector of the Multiline Terminal).</i>	<ul style="list-style-type: none"> Y=65 (1) X-XXXXXXXX: Station No. (2) 1: Paging 3: External relay/External key/External Hold Tone Source/Voice Response System
CM13	For the station connected to PGD(2)-U10 ADP, set the Message Waiting/Stored Call Record lamps not to be lit. For the station connected to PGD(2)-U10 ADP, set the call history not to be stored when answering a station call.	<ul style="list-style-type: none"> Y=03 (1) X-XXXXXXXX: Station No. (2) 1: Not provided <ul style="list-style-type: none"> Y=41 (1) X-XXXXXXXX: Station No. (2) 1: Not stored
A		

A

CM13

DESCRIPTION

DATA

For the station connected to PGD(2)-U10 ADP, set the call history not to be stored when handling an unanswered station call.

- Y=49
- (1) X-XXXXXXXX: Station No.
- (2) 1: Not stored

For the station connected to PGD(2)-U10 ADP, set the call history not to be stored when answering a trunk call.

- Y=60
- (1) X-XXXXXXXX: Station No.
- (2) 1: Not stored

For the station connected to PGD(2)-U10 ADP, set the call history not to be stored when handling an unanswered trunk call.

- Y=61
- (1) X-XXXXXXXX: Station No.
- (2) 1: Not stored

Allow the accommodation of PGD(2)-U10 ADP.

BLADE RESET

- Y=63
- (1) X-XXXXXXXX: Station No.
- (2) 0 : To accommodate
- 1 ◀: Not accommodated

NOTE 1: Set this data only for a Base Port of DLC blade.

NOTE 2: Whether the following equipment can be accommodated to the same DLC blade or not depends on this data.

- When the second data is set to "0"

Accommodatable : DT300/DT400/D^{term}85/PGD(2)-U10 ADP

Unaccommodatable: DESKCON/DSS Console

- When the second data is set to "1"

Accommodatable : DT300/DT400/D^{term}85/DESKCON/DSS Console

Unaccommodatable: PGD(2)-U10 ADP

NOTE 3: When the second data is set to 0, and accommodating DT300/DT400 Series DESI-less to the same DLC blade to which PGD(2)-U10 ADP is accommodated, the Line Key of the DT300/DT400 Series DESI-less does not light up (however, Character Display or Icon Display on the DESI-less screen is provided).

CM44

Assign the function of CCIS Day/Night status Indication to the PGD(2)-U10 ADP/External Equipment Interface.

- Y=00
- (1) XX Y
- XX: 00-31: Relay Group No.
- Y : 0-3: Circuit No.
- (2) 36 XX
- XX: 36: CCIS Day/Night status Indication

Associate the PGD(2)-U10 station number with the Relay Group number.

- Y=01
- (1) 00-31: Relay Group No.
- (2) X-XXXXXXXX: PGD(2)-U10 Station No.
- NONE ◀: No data

END

Hardware Required

PGD(2)-U10 ADP

External Indicator (Bell, Lamp etc.) provided by the customer

For cross connection of the External Indicator, refer to the System Hardware Manual.

Operating Procedure

Main Office:

1. The Attendant executes Day/Night Mode changeover operation using the normal Attendant Consoles (no master) method or the master Attendant Console method.
2. After a specified time, the Day/Night Mode at the remote office is changed over.

Remote Office:

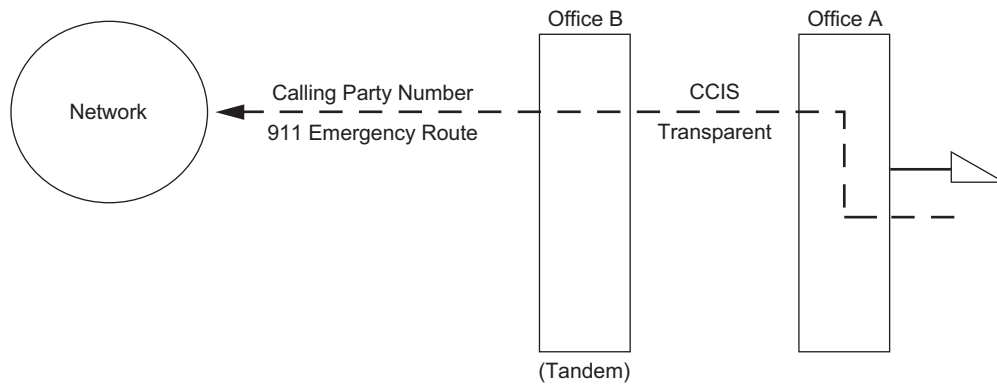
No manual operation required.

CENTRALIZED E911-CCIS

[North America Only]

General Description

This feature allows the system to transmit a calling party number to the 911 Emergency system over CCIS tandem connection.



Station Application

All stations and Attendant Consoles.

Programming

- For Calling Party Side Office (Office A)

START	DESCRIPTION	DATA
CM12	Assign the calling party number sent to the network. “*” , “#” are not available for the sending number.	<ul style="list-style-type: none"> Y=12 (1) X-XXXXXXXX: Station No. (2) X-XXXX: Sending No.
	Assign the Local Office Code Table number.	<ul style="list-style-type: none"> Y=13 (1) X-XXXXXXXX: Station No. (2) 00-14: Local Office Code Table No. 00-14
CM50	Assign the Local Office Code sent to the network. “*” , “#” is not available for the sending number.	<ul style="list-style-type: none"> Y=05 (1) 00-14 : Local Office Code Table No. 00-14 (2) X-XXX...: Local Office Code (Maximum 12 digits)
A		

	DESCRIPTION	DATA
A		
CM20	Assign the LCR data for CCIS calls.	See “Least Cost Routing-3/6 digit” in the Programming Manual.
CM81	This feature is available only when the calling party calls to CCIS route by the LCR.	
CM8A		
CM85		
CM35		
CM8A	Add the calling party number for Enhanced 911 calls via CCIS route.	<ul style="list-style-type: none"> Y=5000-5255 LCR Pattern No. 000-255 (1) 165: Caller ID of outgoing call by CCIS (2) 0: To add
CM08	Provide the system with Caller ID Display feature for CCIS calls.	(1) 379 (2) 1◀: To provide
CMA7	Provide each CCH number with Name Display-CCIS feature.	<ul style="list-style-type: none"> Y=26 (1) 00-63: CCH No. (2) 1◀: To provide
	Provide the CCH number with Calling Party Information transferring service.	<ul style="list-style-type: none"> Y=28 (1) 00-63: CCH No. (2) 1◀: To provide
END		

- For Tandem Office (Office B)

START	DESCRIPTION	DATA
CM08	Provide the system with Caller ID Display feature for CCIS calls.	(1) 379 (2) 1◀: To provide
CMA7	Provide each CCH number with Name Display-CCIS feature.	• Y=26 (1) 00-63: CCH No. (2) 1◀: To provide
	Provide the CCH number with Calling Party Information transferring service.	• Y=28 (1) 00-63: CCH No. (2) 1◀: To provide
CM35	Provide the Calling Party Information transferring service to the Enhanced 911 route.	• Y=145 (1) 00-63: Trunk Route No. (2) 0: To provide
END		

Operating Procedure

To place a Centralized E911-CCIS call:

1. Lift the handset and receive a dial tone.
2. Dial the trunk access code and telephone number (e. g. 911).
3. The system automatically completes a call and sends the pre-assigned number: calling area code + calling station number.

CONSULTATION HOLD-ALL CALLS-CCIS

General Description

This feature permits a station user, within the CCIS network, to hold any incoming or outgoing public network or Tie Line call while originating a call to another station within the CCIS network.

Programming

START	DESCRIPTION	DATA
CM12	Assign Service Restriction Class C to the required stations.	<ul style="list-style-type: none"> Y=07 (1) X-XXXXXXXX: Station No. (2) XX: 00-15◀: Service Restriction Class C
CM15	Allow the Switch Hook Flash capability in Service Restriction Class C assigned by CM12 Y=07.	<ul style="list-style-type: none"> Y=090, 091 Switch Hook Flash on External Call (1) 00-15: Service Restriction Class C assigned by CM12 Y=07 (2) 1◀: Allow (Special Dial Tone Connection)
CM08	When STA-A has a C.O. line on Consultation Hold and is talking to STA-B has hung-up.	(1) 117 (2) 0: Return to the original call.
END		

Operating Procedure

Single-Line Telephone

To hold the original call and place a second call from a Single-Line Telephone:

1. Press the hookswitch momentarily and receive Feature Dial Tone.
2. The original call is placed on hold and receives Music On Hold, if provided.
3. Dial the second station number and receive ringback tone.
4. The second station answers. The original call is now on Consultation Hold-All Calls-CCIS.

To return to the original call from a Single-Line Telephone:

1. In any of the following cases, the calling station can return to the original call by momentarily pressing the hookswitch:
 - a. The second station called is busy.
 - b. The calling station cannot gain access to the second station due to restriction.
 - c. The second station does not answer.
2. If the second party hangs up, the calling station will be automatically returned to the original call.
3. If the originating station momentarily presses the hookswitch, a three-way conference will be initiated.

Multiline Terminal

To hold the original call and place a second call from a Multiline Terminal:

1. Press the **Transfer** key and receive Feature Dial Tone.
2. The original call is placed on hold and receives Music On Hold, if provided.
3. Dial the second station number and receive ringback tone.
4. The second station answers. The original call is now on Consultation Hold-All Calls-CCIS.

To return to the original call from a Multiline Terminal:

1. In any of the following cases, the calling station can return to the original call by pressing the **Transfer** key:
 - a. The second station called is busy.
 - b. The calling station cannot gain access to the second station due to restriction.
 - c. The second station does not answer.
2. If the second station hangs up, the calling station will be automatically returned to the original call.
3. If the second station remains in the conversation, pressing the **Transfer** or **Answer** key returns the original call to the Multiline Terminal while the second call enters Consultation Hold-All Calls-CCIS.
4. By pressing the **Conf** key, a three-party conference will be initiated.

DATA LINE SECURITY-CCIS

General Description

This feature allows the lines which are used for data transmission through CCIS to be protected from interruptions such as Attendant Camp-On, Busy Verification-CCIS, Executive Right of Way and Attendant Override.

Programming

START	DESCRIPTION	DATA
<div style="border: 1px solid black; padding: 2px; width: fit-content;">CM13</div>	Assign the function of Analog Data station (Single Line Station with FAX or MODEM.) to required stations. NOTE: <i>Ringling interval depends on as follows when the second data is set as 0. The ringling interval for the FAX station is as per the setting of ringling signal for FAX (CM04 Y=00>09) (default: as per CM04 Y=00>05).</i>	<ul style="list-style-type: none"> • Y=07 (1) X-XXXXXXXX: Station No. (2) 0: Data station
END		

Operating Procedure

No manual operation is required.

DELUXE TRAVELING CLASS MARK-CCIS

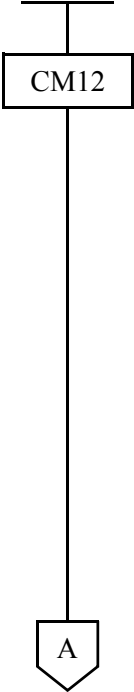
General Description

This feature provides outgoing call restrictions within the CCIS network.

The following three types of restrictions are allowed:

- Deluxe Traveling Class Mark Restriction
- Route Restriction
- Numbering Restriction.

Programming

START	DESCRIPTION	DATA
 <div>CM12</div>	Assign a Trunk Restriction Class to the required stations.	<ul style="list-style-type: none">• Y=01 Trunk Restriction Class(1) X-XXXXXXXX: Station No.(2) X Z: Route Restriction Class<ul style="list-style-type: none">X: 1-8: Trunk Restriction Class in Day ModeZ: 1-8: Trunk Restriction Class in Night Mode1: Unrestricted (RCA)2: Non-Restricted 1 (RCB)3: Non-Restricted 2 (RCC)4: Semi-Restricted 1 (RCD)5: Semi-Restricted 2 (RCE)6: Restricted 1 (RCF)7: Restricted 2 (RCG)8: Fully-Restricted (RCH)

A

CM35

DESCRIPTION

DATA

Specify to outgoing/incoming call capability on each Route Restriction Class (RCA-RCH) assigned by CM12 Y=01 to each route.

NOTE: For the route assigned as C.O. line by CM35 Y=056 (RCF), 057 (RCG), 058 (RCH) are automatically assigned to "Restricted".

- Y=051 (RCA)
- Y=052 (RCB)
- Y=053 (RCC)
- Y=054 (RCD)
- Y=055 (RCE)
- Y=056 (RCF)
- Y=057 (RCG)
- Y=058 (RCH)
- Y=061 (RCA)
- Y=062 (RCB)
- Y=063 (RCC)
- Y=064 (RCD)
- Y=065 (RCE)
- Y=066 (RCF)
- Y=067 (RCG)
- Y=068 (RCH)

Restriction of
Outgoing Connection

Restriction of
Incoming Connection

- (1) 00-63: Trunk Route No.
(2) 0 : Restricted
1◀: Allow

CM36

To deny access to particular trunk groups from dial-repeating Tie trunks, specify the combination of trunk route restricting the Trunk-to-Trunk Connection.

- Y=0
- (1) XX ZZ
XX: 00-63: Incoming Trunk (Tie Trunk) Route
ZZ : 00-63: Outgoing Trunk (Miscellaneous Trunk) Route
(2) 0: Allow

END

When changing the default setting (see **NOTE**), or when receiving the 2400 IPX Trunk Restriction Class (9-15) as a Deluxe Traveling Class Mark, execute the following programming.

START	DESCRIPTION	DATA
CM42	Assign the 2400 IPX Trunk Restriction Class to each SV9300 Trunk Restriction Class for the restriction class conversion from the SV9300 to the 2400 IPX, if required.	(1) 20: SV9300 TRK Restriction Class 1 (RCA) 21: SV9300 TRK Restriction Class 2 (RCB) 22: SV9300 TRK Restriction Class 3 (RCC) 23: SV9300 TRK Restriction Class 4 (RCD) 24: SV9300 TRK Restriction Class 5 (RCE) 25: SV9300 TRK Restriction Class 6 (RCF) 26: SV9300 TRK Restriction Class 7 (RCG) 27: SV9300 TRK Restriction Class 8 (RCH) (2) 00-15: 2400 IPX TRK Restriction Class (0-15)
	Assign the SV9300 Trunk Restriction Class to each 2400 IPX Trunk Restriction Class for the restriction class conversion from the 2400 IPX to the SV9300, if required.	(1) 30: 2400 IPX TRK Restriction Class 0 31: 2400 IPX TRK Restriction Class 1 32: 2400 IPX TRK Restriction Class 2 33: 2400 IPX TRK Restriction Class 3 34: 2400 IPX TRK Restriction Class 4 35: 2400 IPX TRK Restriction Class 5 36: 2400 IPX TRK Restriction Class 6 37: 2400 IPX TRK Restriction Class 7 38: 2400 IPX TRK Restriction Class 8 39: 2400 IPX TRK Restriction Class 9 40: 2400 IPX TRK Restriction Class 10 41: 2400 IPX TRK Restriction Class 11 42: 2400 IPX TRK Restriction Class 12 43: 2400 IPX TRK Restriction Class 13 44: 2400 IPX TRK Restriction Class 14 45: 2400 IPX TRK Restriction Class 15 (2) 01-08: SV9300 TRK Restriction Class (1-8)
END		

NOTE: *If no data is set, the default setting is shown below.*

(1) SV9300 to 2400 IPX:

1ST DATA	2ND DATA
20: SV9300 TRK Restriction Class 1 (RCA)	01: 2400 IPX TRK Restriction Class 1
21: SV9300 TRK Restriction Class 2 (RCB)	02: 2400 IPX TRK Restriction Class 2
22: SV9300 TRK Restriction Class 3 (RCC)	03: 2400 IPX TRK Restriction Class 3
23: SV9300 TRK Restriction Class 4 (RCD)	04: 2400 IPX TRK Restriction Class 4
24: SV9300 TRK Restriction Class 5 (RCE)	05: 2400 IPX TRK Restriction Class 5
25: SV9300 TRK Restriction Class 6 (RCF)	06: 2400 IPX TRK Restriction Class 6
26: SV9300 TRK Restriction Class 7 (RCG)	07: 2400 IPX TRK Restriction Class 7
27: SV9300 TRK Restriction Class 8 (RCH)	08: 2400 IPX TRK Restriction Class 8

(2) 2400 IPX to SV9300:

1ST DATA	2ND DATA
30 : 2400 IPX TRK Restriction Class 0	01: SV9300 TRK Restriction Class 1 (RCA)
31 : 2400 IPX TRK Restriction Class 1	01: SV9300 TRK Restriction Class 1 (RCA)
32 : 2400 IPX TRK Restriction Class 2	02: SV9300 TRK Restriction Class 2 (RCB)
33 : 2400 IPX TRK Restriction Class 3	03: SV9300 TRK Restriction Class 3 (RCC)
34 : 2400 IPX TRK Restriction Class 4	04: SV9300 TRK Restriction Class 4 (RCD)
35 : 2400 IPX TRK Restriction Class 5	05: SV9300 TRK Restriction Class 5 (RCE)
36 : 2400 IPX TRK Restriction Class 6	06: SV9300 TRK Restriction Class 6 (RCF)
37 : 2400 IPX TRK Restriction Class 7	07: SV9300 TRK Restriction Class 7 (RCG)
38-45: 2400 IPX TRK Restriction Class 8-15	08: SV9300 TRK Restriction Class 8 (RCH)

Operating Procedure

No manual operation is required.

DIAL ACCESS TO ATTENDANT-CCIS

General Description

When SV9300 is a master office or a slave office, this feature allows a station user to call an Attendant Console by dialing an operator call code via the CCIS network.

Programming

- When SV9300 is a master office:

START	DESCRIPTION	DATA
CM62	Specify the tenants to be handled by each ATT Group. NOTE 1: When marking a link with the 2400 IPX, Tenant number should be assigned as 01-63, not 00. NOTE 2: A reset by CM60 Y=90>0: 0 is required after this data setting.	<ul style="list-style-type: none"> Y=0-3: ATT Group 0-3 assigned by CM60 Y=00 (1) 00-63: Tenant No. (2) 0 : To handle 1 ◀: Not handled
CM20	Assign the access code for LCR Group 3 (A129).	<ul style="list-style-type: none"> Y=0: Number Plan Group 0-3 (1) X-XXXX (2) A129
CM8A	Assign an area code table to be used to select a route pattern table. Assign the Route Pattern number to the Area Code Development Pattern number assigned by CM8A Y=A000.	<ul style="list-style-type: none"> Y=A000 (1) 3: LCR Group 3 (2) 4005-4007: Area Code Development Pattern No. 5-7 Y=4005-4007 (1) X-X...X: Area Code (Maximum 8 digits) (2) 0000-0255: Route Pattern No. 000-255
A		

A	DESCRIPTION	DATA
CM8A	Assign the next Route Pattern number to the Route Pattern number assigned by CM8A Y=4005-4007.	<ul style="list-style-type: none"> Y=0000-0255 Route Pattern No.000-255 (1) 0: Designation of next table (2) 0000-0255: Next Route Pattern No.000-255
	NOTE: <i>This data is required to expand the order of LCR selection that is assigned by CM8A Y=0000-0255. The order of LCR selection can be expand to the maximum seventh.</i>	
	Assign the intra-office station to the Area Code Development Pattern number assigned by CM8A Y=A000.	<ul style="list-style-type: none"> Y=4005-4007 Area Code Development Pattern No. 5-7 (1) X-X...X: Area Code (Maximum 8 digits) (2) 8001-8008: 1-8 digits Intra-Office Station
	Assign the route pattern table with the desired properties and selection of appropriate routes.	<ul style="list-style-type: none"> Y=0000-0255: Route Pattern No. 000-255 (1) 1-4: Order of LCR Selection <ul style="list-style-type: none"> 1: 1st 2: 2nd 3: 3rd 4: 4th (2) XXX ZZ <ul style="list-style-type: none"> XXX: 000-255: LCR Pattern No. ZZ : 00-63: Trunk Route No.
<u>END</u>		

- When SV9300 is a slave office:

START	DESCRIPTION	DATA
CM20	Assign the access code for LCR Group 3 (A129).	<ul style="list-style-type: none"> • Y=0: Number Plan Group 0-3 (1) X-XXXX (2) A129
CM8A	Assign an area code table to be used to select a route pattern table.	<ul style="list-style-type: none"> • Y=A000 (1) 3: LCR Group 3 (2) 4005-4007: Area Code Development Pattern No. 5-7
	Assign the Route Pattern number to the Area Code Development Pattern number assigned by CM8A Y=A000.	<ul style="list-style-type: none"> • Y=4005-4007 (1) X-X...X: Area Code (Maximum 8 digits) (2) 0000-0255: Route Pattern No. 000-255
	Assign the next Route Pattern number to the Route Pattern number assigned by CM8A Y=4005-4007.	<ul style="list-style-type: none"> • Y=0000-0255 Route Pattern No.000-255 (1) 0: Designation of next table (2) 0000-0255: Next Route Pattern No.000-255
	NOTE: <i>This data is required to expand the order of LCR selection that is assigned by CM8A Y=0000-0255. The order of LCR selection can be expand to the maximum seventh.</i>	
	Assign the intra-office station to the Area Code Development Pattern number assigned by CM8A Y=A000.	<ul style="list-style-type: none"> • Y=4005-4007 Area Code Development Pattern No. 5-7 (1) X-X...X: Area Code (Maximum 8 digits) (2) 8001-8008: 1-8 digits Intra-Office Station
	Assign the route pattern table with the desired properties and selection of appropriate routes.	<ul style="list-style-type: none"> • Y=0000-0255: Route Pattern No. 000-255 (1) 1-4: Order of LCR Selection 1: 1st 2: 2nd 3: 3rd 4: 4th (2) XXX ZZ XXX: 000-255: LCR Pattern No. ZZ : 00-63: Trunk Route No.
END		

Operating Procedure

To call an Attendant Console:

1. The station user dials the operator call code of a master office or a slave office and receives ringback tone.
2. The **ATND** lamp for Incoming Call Identification flashes on the Attendant Console. The Attendant answers the call.

DIAL MASK FOR TRUNK CALL-CCIS

General Description

This feature allows dialing numbers to mask with asterisk on LCD of the terminal while CCIS trunk call is being established.

For example, when ID code input is required on an ID Code Authentication Manager in the distant office via CCIS trunk, this feature can mask the entered ID code with asterisk (*) on the LCD of Multiline Terminal to conceal the ID code.

Programming

START	DESCRIPTION	DATA
CM12	Assign Service Restriction Class C to the required stations.	<ul style="list-style-type: none">• Y=07(1) X-XXXXXXXX: Station No.(2) XX: 00-15: Service Restriction Class C
CM15	Allow Dial Mask on LCD during talking with trunk in Service Restriction Class C assigned by CM12 Y=07.	<ul style="list-style-type: none">• Y=289(1) 00-15: Service Restriction Class C assigned by CM12 Y=07(2) 0: Allow
CM35	Allow Dial Mask on LCD during talking with trunk.	<ul style="list-style-type: none">• Y=314(1) 00-63: Trunk Route No.(2) 0: Allow
END		

Operating Procedure

No manual operation is required.

DIRECT-IN TERMINATION-CCIS

General Description

This feature automatically routes incoming exchange calls through CCIS to a preassigned station in the network, without Attendant assistance.

Programming

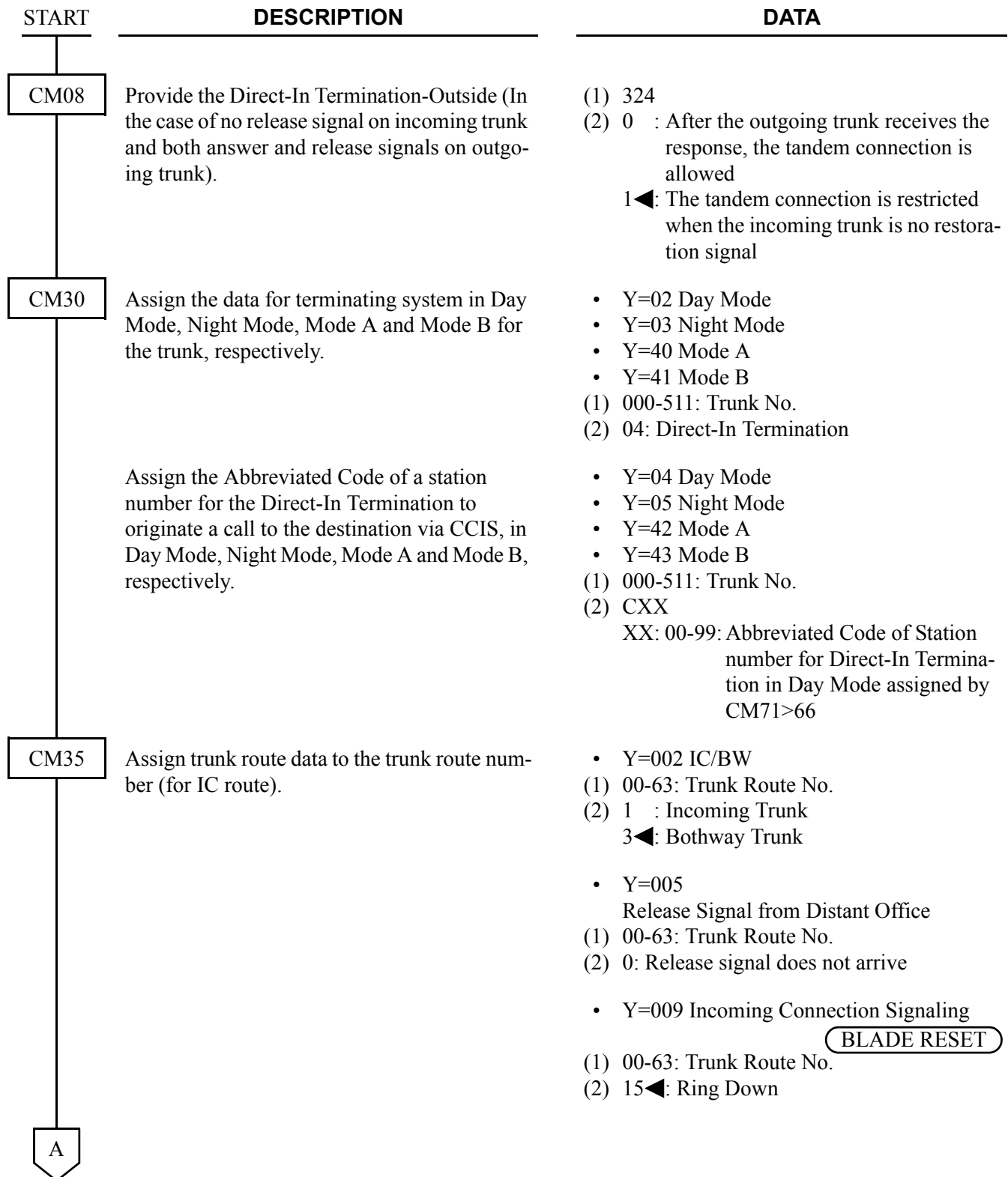
- When a release signal arrives on the incoming (IC) trunk

START	DESCRIPTION	DATA
CM30	Assign the data for terminating system in Day Mode, Night Mode, Mode A and Mode B of the trunk, respectively. Assign the Abbreviated Code of a station number for the Direct-In Termination to originate a call to the destination via CCIS, in Day Mode, Night Mode, Mode A and Mode B, respectively.	<ul style="list-style-type: none">Y=02 Day ModeY=03 Night ModeY=40 Mode AY=41 Mode B <p>(1) 000-511: Trunk No. (2) 04: Direct-In Termination</p> <ul style="list-style-type: none">Y=04 Day ModeY=05 Night ModeY=42 Mode AY=43 Mode B <p>(1) 000-511: Trunk No. (2) CXX XX: 00-99: Abbreviated Code of Station number for Direct-In Termination in Day Mode assigned by CM71>66</p>
CM35	Assign trunk route data to the trunk route number (for IC route).	<ul style="list-style-type: none">Y=002 IC/BW <p>(1) 00-63: Trunk Route No. (2) 1 : Incoming Trunk 3◀: Bothway Trunk</p> <ul style="list-style-type: none">Y=005 Release Signal from Distant Office <p>(1) 00-63: Trunk Route No. (2) 1◀: Release signal arrives</p> <ul style="list-style-type: none">Y=009 Incoming Connection Signaling <p>(1) 00-63: Trunk Route No. (2) 15◀: Ring Down</p>
A		

BLADE RESET

	DESCRIPTION	DATA
A		
CM36	Specify the combination of trunk routes allowing the tandem connection.	<ul style="list-style-type: none"> Y=0 (1) XX ZZ XX: 00-63: Incoming Trunk Route ZZ : 00-63: Outgoing Trunk Route (2) 0: Allow
CM71	Assign the Destination Number memory area used exclusively for DIT-Outside.	(1) 66: Exclusive for DIT-Outside (2) XXX YYY XXX : 000-299: Starting Memory Slot No. in Block YYY : 001-300: Number of Slots to be assigned in Block NONE◀: No data
CM72	Set the stored Destination Number to the Memory Slot number allocated by CM71.	<ul style="list-style-type: none"> Y=0 (1) 000-299: Memory Slot No. (2) XXXX [] YY...Y XXXX : Access Code (Maximum 4 digits) [] : Separator Mark YY...Y : Called Party No. (Maximum 26 digits)
END		

- When no release signal arrives on the IC trunk.



BLADE RESET

	DESCRIPTION	DATA
A		
CM35	Assign Trunk Route data to the trunk route number (for OG route).	<ul style="list-style-type: none"> Y=004 Answer Signal from Distant Office (1) 00-63: Trunk Route No. (2) 2: Answer signal arrives
CM36	Specify the combination of trunk routes allowing the tandem connection.	<ul style="list-style-type: none"> Y=00 (1) XX ZZ XX: 00-63: Incoming Trunk Route ZZ : 00-63: Outgoing Trunk Route (2) 0: Allow
CM71	Assign the Destination Number memory area used exclusively for DIT-Outside.	(1) 66: Exclusive for DIT-Outside (2) XXX YYY XXX : 000-299: Starting Memory Slot No. in Block YYY : 001-300: Number of Slots to be assigned in Block NONE◀: No data
CM72	Set the stored Destination Number to the Memory Slot number allocated by CM71.	<ul style="list-style-type: none"> Y=0 (1) 000-299: Memory Slot No. (2) XXXX ◻ YY...Y XXXX : Access Code (Maximum 4 digits) ◻ : Separator Mark YY...Y : Called Party No. (Maximum 26 digits)
CM41	When no release signal arrives on the IC trunk, specify the timer for forced disconnection when the called party does not answer.	<ul style="list-style-type: none"> Y=0 (1) 55 (2) 01-13: 8-60 seconds (4 second increments) If no data is set, the default setting is 20-24 seconds.
END		

Operating Procedure

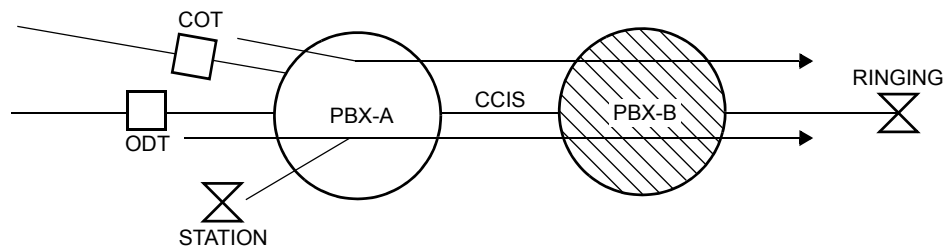
The outside calling party dials the telephone number, as usual. The call is answered at a predetermined station, within the CCIS network, by passing the Attendant Console.

DISTINCTIVE RINGING-CCIS

General Description

This feature provides distinctive station ringing patterns for terminated calls, through the CCIS network, so that a station user can distinguish between incoming internal and external calls.

Programming



The ringing pattern should be selected in PBX-B.

- (1) When the ringing cadence on incoming CCIS call by CM35 Y=033, 034 is not provided (CM08> 1209: 1):

START	DESCRIPTION	DATA
<div style="border: 1px solid black; padding: 5px; width: fit-content;">CM04</div>	Specify the ringing tone interval of Single Line Telephone on incoming calls from station through the CCIS.	<ul style="list-style-type: none"> Y=00 (1) 06 (2) See Interval of Ringing Tones for Single Line Telephone by CM04 Y=00>05/06/07
<div style="border: 1px solid black; padding: 5px; width: fit-content; text-align: center;">A</div>		

[Page 1-168](#)

A

CM08

DESCRIPTION

DATA

Specify the ringing tone interval of Multiline Terminal on incoming calls from station through the CCIS.

- (1) 138
- (2) See the table below

[North America Only]

◀: Default

CM08>138		
Kind of Call Termination	0	1◀
For calls from Station through CCIS	2 seconds ON-4 seconds OFF (When the CM08>138 is set to 0 in the opposite office)	1 second ON-2 seconds OFF
For calls from C.O./Tie Line through CCIS (When the CM08>1203 is set to 0 in the opposite office)	2 seconds ON-4 seconds OFF (When the CM35 Y=000 is set to 04 (Tie Line) in the opposite office)	2 seconds ON-4 seconds OFF
	1 second ON-2 seconds OFF (When the CM35 Y=000 is set to 00/01/02/03 (DDD/FX/WATS/CCSA) in the opposite office)	
For calls from C.O./Tie Line through CCIS (When the CM08>1203 is set to 1 in the opposite office)	2 seconds ON-4 seconds OFF (When the CM35 Y=033 is set to 0/1/2 in the opposite office)	2 seconds ON-4 seconds OFF
	1 second ON-2 seconds OFF (When the CM35 Y=033 is set to 3 in the opposite office)	

B

B

DESCRIPTION

DATA

CM08

[Other than North America]

◀: Default

Kind of Call Termination	CM08>138	
	0	1◀
For calls from Station through CCIS	As per CM08>392 (When the CM08>138 is set to 0 in the opposite office)	As per CM08>396
For calls from C.O./Tie Line through CCIS (When the CM08>1203 is set to 0 in the opposite office)	As per CM08>392 (When the CM35 Y=000 is set to 04 (Tie Line) in the opposite office)	As per CM08>392
	As per CM08>396 (When the CM35 Y=000 is set to 00 (DDD) in the opposite office)	
For calls from C.O./Tie Line through CCIS (When the CM08>1203 is set to 1 in the opposite office)	As per CM08>392 (When the CM35 Y=033 is set to 0/1/2 in the opposite office)	As per CM08>392
	As per CM08>396 (When the CM35 Y=033 is set to 3 in the opposite office)	

- CM08>392
 - 0 : 2 seconds ON-4 seconds OFF
 - 1◀: 0.4 seconds ON-0.2 seconds OFF-0.4 seconds ON-2 seconds OFF
- CM08>396
 - 0 : 2 seconds ON-4 seconds OFF
 - 1◀: 1 second ON-2 seconds OFF

C



DESCRIPTION

DATA

CM35

Specify the ringing tone interval of Multiline Terminal to each trunk route.

- Y=034, 164
- (1) 00-63: Trunk Route No.
- (2) See the table below

◀: Default

Y=034	Y=164: 0	Y=164: 1◀
0	Ringer Tone Pattern 3	Ringer Tone Pattern 0
1	Ringer Tone Pattern 6	Ringer Tone Pattern 1
2	Ringer Tone Pattern 5	Ringer Tone Pattern 2
3◀	Ringer Tone Pattern 4	Ringer Tone Pattern 7

CM65

Specify the ringing frequency of the Multiline Terminal.

- Y=40
- (1) 00-63: Tenant No. assigned by CM30
Y=01/CM12 Y=04
- (2) See the table below

◀: Default

Ringer Tone Pattern No.	Y=40: 0	Y=40: 1◀
1	Ringer Tone 1	520 + 660 [Hz]/8 [Hz] Modulating Signal
2	Ringer Tone 2	660 + 760 [Hz]/16 [Hz] Modulating Signal
3	Ringer Tone 3	1100 [Hz] Envelop
4	Ringer Tone 4	540 [Hz]
5	Ringer Tone 5	1100 [Hz]
6	Not used	1400 + 1100 [Hz]
7	Not used	520 + 660 [Hz]/16 [Hz] Modulating Signal

CM08

Specify the ringing cadence on incoming CCIS call by CM35 Y=033, 034.

- (1) 1209
- (2) 1◀: Not provided

END

- (2) When the ringing cadence on incoming CCIS call by CM35 Y=033, 034 is provided (CM08>1209:0):

START	DESCRIPTION	DATA																	
CM08	Specify the ringing cadence on incoming CCIS call by CM35 Y=033, 034.	(1) 1209 (2) 0: To provide																	
CM35	Specify the interval of ringing tones for station on incoming calls.	<ul style="list-style-type: none"> Y=033 (1) 00-63: Trunk Route No. (2) See the table below																	
[North America Only] <div>◀: Default</div> <table> <tr> <th rowspan="2">CM35 Y=033 (2nd Data)</th><th colspan="2">Ringing Cadence</th></tr> <tr> <th>Multiline Terminal</th><th>Single Line Telephone NOTE</th></tr> <tr> <td>0</td><td>0.5 seconds ON-0.5 seconds OFF</td><td>As per CM04 Y=00>05</td></tr> <tr> <td>1</td><td>0.5 seconds ON-0.5 seconds OFF- 0.5 seconds ON-1.5 seconds OFF</td><td>As per CM04 Y=00>07</td></tr> <tr> <td>2</td><td>1 second ON-2 seconds OFF</td><td>As per CM04 Y=00>05</td></tr> <tr> <td>3◀</td><td>2 seconds ON-4 seconds OFF</td><td>As per CM04 Y=00>06</td></tr> </table>			CM35 Y=033 (2nd Data)	Ringing Cadence		Multiline Terminal	Single Line Telephone NOTE	0	0.5 seconds ON-0.5 seconds OFF	As per CM04 Y=00>05	1	0.5 seconds ON-0.5 seconds OFF- 0.5 seconds ON-1.5 seconds OFF	As per CM04 Y=00>07	2	1 second ON-2 seconds OFF	As per CM04 Y=00>05	3◀	2 seconds ON-4 seconds OFF	As per CM04 Y=00>06
CM35 Y=033 (2nd Data)	Ringing Cadence																		
	Multiline Terminal	Single Line Telephone NOTE																	
0	0.5 seconds ON-0.5 seconds OFF	As per CM04 Y=00>05																	
1	0.5 seconds ON-0.5 seconds OFF- 0.5 seconds ON-1.5 seconds OFF	As per CM04 Y=00>07																	
2	1 second ON-2 seconds OFF	As per CM04 Y=00>05																	
3◀	2 seconds ON-4 seconds OFF	As per CM04 Y=00>06																	
NOTE: See Interval of Ringing Tones for Single Line Telephone by CM04 Y=00>05/06/07. Page 1-168																			
A																			

A

DESCRIPTION

DATA

CM35

[Other than North America]

◀: Default

CM35 Y=033 (2nd Data)	Ringing Cadence	
	Multiline Terminal NOTE 1	Single Line Telephone NOTE 2
0	Ringing NOTE 3	As per CM04 Y=00>05
1	Special Ringing	As per CM04 Y=00>07
2	Internal Ringing	As per CM04 Y=00>05
3◀	External Ringing	As per CM04 Y=00>06

NOTE 1: See Interval of Ringing Tones for Multiline Terminal by CM08>392/396/397.
[Page 1-167](#)

NOTE 2: See Interval of Ringing Tones for Single Line Telephone by CM04 Y=00>05/06/07.
[Page 1-168](#)

NOTE 3: For Multiline Terminal, Special Ringing; 0.5 seconds ON-0.5 seconds OFF [For Australia/Asia/Africa/Europe/Latin America/Middle East/Russia] or 0.25 seconds ON-0.25 seconds OFF-0.25 seconds ON-0.25 seconds OFF [For EMEA] is applied.

Specify the ringing tone interval of Multiline Terminal to each trunk route.

- Y=034, 164
- (1) 00-63: Trunk Route No.
- (2) See the table below

◀: Default

Y=034	Y=164: 0	Y=164: 1◀
0	Ringer Tone Pattern 3	Ringer Tone Pattern 0
1	Ringer Tone Pattern 6	Ringer Tone Pattern 1
2	Ringer Tone Pattern 5	Ringer Tone Pattern 2
3◀	Ringer Tone Pattern 4	Ringer Tone Pattern 7

B

B

CM65

DESCRIPTION

DATA

Specify the ringing frequency of the Multiline Terminal.

- Y=40
- (1) 00-63: Tenant No. assigned by CM30
Y=01/CM12 Y=04
- (2) See the table below

◀: Default

Ringer Tone Pattern No.	Y=40: 0	Y=40: 1◀
1	Ringer Tone 1	520 + 660 [Hz]/8 [Hz] Modulating Signal
2	Ringer Tone 2	660 + 760 [Hz]/16 [Hz] Modulating Signal
3	Ringer Tone 3	1100 [Hz] Envelop
4	Ringer Tone 4	540 [Hz]
5	Ringer Tone 5	1100 [Hz]
6	Not used	1400 + 1100 [Hz]
7	Not used	520 + 660 [Hz]/16 [Hz] Modulating Signal

END

Interval of Ringing Tones for Multiline Terminal by CM08>392/396/397

Unit: seconds ◀: Default

Pattern	1	2	3	4	5	6	7	8
CM08>392	1◀	0	1◀	0	1◀	0	0	1◀
CM08>396	1◀	1◀	0	0	1◀	0	1◀	0
CM08>397	1◀	1◀	1◀	1◀	0	0	0	0
Internal Ringing	1 ON -2 OFF	1 ON -2 OFF	2 ON -4 OFF	2 ON -4 OFF	0.375 ON -0.25 OFF -0.375 ON -2 OFF	0.375 ON -0.25 OFF -0.375 ON -2 OFF	1 ON -4 OFF	0.25 ON -0.25 OFF -0.25 ON -4.25 OFF
External Ringing	0.375 ON -0.25 OFF -0.375 ON -2 OFF	2 ON -4 OFF	0.375 ON -0.25 OFF -0.375 ON -2 OFF	2 ON -4 OFF	2 ON -4 OFF	2 ON -4 OFF	0.25 ON -0.25 OFF -0.25 ON -4.25 OFF	1 ON -4 OFF
Special Ringing	0.25 ON -0.125 OFF -0.25 ON -0.125 OFF -0.25 ON -2 OFF	0.5 ON -0.5 OFF -0.5 ON -1.5 OFF	0.25 ON -0.125 OFF -0.25 ON -0.125 OFF -0.25 ON -2 OFF	0.5 ON -0.5 OFF -0.5 ON -1.5 OFF	0.25 ON -0.125 OFF -0.25 ON -0.125 OFF -0.25 ON -2 OFF	0.25 ON -0.125 OFF -0.25 ON -0.125 OFF -0.25 ON -2 OFF	0.25 ON -0.125 OFF -0.25 ON -0.125 OFF -0.25 ON -2 OFF	0.25 ON -0.125 OFF -0.25 ON -0.125 OFF -0.25 ON -2 OFF

NOTE 1: The above ringer patterns (5-8) are effective only when CM31 Y=0>0: 04, 15.

NOTE 2: Pattern 5 is standard setting for Brazil.

NOTE 3: Pattern 6 is standard setting for France.

NOTE 4: Pattern 7 and 8 are standard setting for EMEA.

Interval of Ringing Tones for Single Line Telephone by CM04 Y=00>05/06/07

◀: Default

2nd Data	CM04 Y=00		
	1st Data=05 (Single Line Telephone ringing signal for Station-to-Station connection) NOTE	1st Data=06 (Single Line Telephone ringing signal from a trunk)	1st Data=07 (Special ringing signal for Single Line Telephone ring)
01	ON	ON	ON
02	2 seconds ON-4 seconds OFF	2 seconds ON-4 seconds OFF	2 seconds ON-4 seconds OFF
03	1 second ON-2 seconds OFF	1 second ON-2 seconds OFF	1 second ON-2 seconds OFF
04	0.5 seconds ON-0.5 seconds OFF	0.5 seconds ON-0.5 seconds OFF	0.5 seconds ON-0.5 seconds OFF
05	0.25 seconds ON-0.25 seconds OFF	0.25 seconds ON-0.25 seconds OFF	0.25 seconds ON-0.25 seconds OFF
06	0.5 seconds ON-0.5 seconds OFF -0.5seconds ON-1.5 seconds OFF	0.5 seconds ON-0.5 seconds OFF -0.5 seconds ON-1.5 seconds OFF	0.5 seconds ON-0.5 seconds OFF -0.5seconds ON-1.5 seconds OFF
07	0.25 seconds ON-0.25 seconds OFF -0.25 seconds ON-5.25 seconds OFF	0.25 seconds ON-0.25 seconds OFF -0.25 seconds ON-5.25 seconds OFF	0.25 seconds ON-0.25 seconds OFF -0.25 seconds ON-5.25 seconds OFF
08	0.375 seconds ON-0.25 seconds OFF -0.375 seconds ON-2 seconds OFF	0.375 seconds ON-0.25 seconds OFF -0.375 seconds ON-2 seconds OFF	0.375 seconds ON-0.25 seconds OFF -0.375 seconds ON-2 seconds OFF
09	0.25 seconds ON-0.125 seconds OFF -0.25 seconds ON-0.125 seconds OFF -0.25 seconds ON-2 seconds OFF	0.25 seconds ON-0.125 seconds OFF -0.25 seconds ON-0.125 seconds OFF -0.25 seconds ON-2 seconds OFF	0.25 seconds ON-0.125 seconds OFF -0.25 seconds ON-0.125 seconds OFF -0.25 seconds ON-2 seconds OFF
10	1 second ON-4 seconds OFF	1 second ON-4 seconds OFF	1 second ON-4 seconds OFF
11	0.25 seconds ON-0.25 seconds OFF -0.25 seconds ON-4.25 seconds OFF	0.25 seconds ON-0.25 seconds OFF -0.25 seconds ON-4.25 seconds OFF	0.25 seconds ON-0.25 seconds OFF -0.25 seconds ON-4.25 seconds OFF
12	1 second ON-3 seconds OFF	1 second ON-3 seconds OFF	1 second ON-3 seconds OFF
13	0.25 seconds ON-0.25 seconds OFF -0.25 seconds ON-2.25 seconds OFF	0.25 seconds ON-0.25 seconds OFF -0.25 seconds ON-2.25 seconds OFF	0.25 seconds ON-0.25 seconds OFF -0.25 seconds ON-2.25 seconds OFF
31◀	1 second ON-2 seconds OFF	2 seconds ON-4 seconds OFF	0.375 seconds ON-0.25 seconds OFF -0.375 seconds ON-2 seconds OFF

NOTE: When this command is set, the FAX Ringing interval is set as same.

Operating Procedure

No manual operation is required.

DO NOT DISTURB-CCIS

General Description

This feature allows a station user to establish the Do Not Disturb (DND) status on a temporary basis, during which time access to the station from incoming CCIS calls will be denied.

Station Application

Single Line Telephone, Multiline Terminal and Attendant Console

Programming

START	DESCRIPTION	DATA
CM12	Assign Service Restriction Class A to the required stations.	<ul style="list-style-type: none"> Y=02 (1) X-XXXXXXXX: Station No. (2) XX ZZ XX: 00-15◀: Service Restriction Class A
CM15	Allow Do Not Disturb in Service Restriction Class A assigned by CM12 Y=02.	<ul style="list-style-type: none"> Y=019 (1) 00-15: Service Restriction Class A assigned by CM12 Y=02 (2) 1◀: Allow
CM13	Assign the Do Not Disturb group of stations. Do Not Disturb is set simultaneously for the stations assigned by this command, by operation from the Attendant Console.	<ul style="list-style-type: none"> Y=00 (1) X-XXXXXXXX: Station No. (2) 0: To provide
CM20	Assign the access code for Do Not Disturb Set/Cancel.	<ul style="list-style-type: none"> Y=0-3 Numbering Plan Group 0-3 (1) X-XXXX: Access Code (2) A022: Do Not Disturb Set A023: Do Not Disturb Cancel
CM51	Assign the destination of the call when the called station is set to Do Not Disturb.	<ul style="list-style-type: none"> Y=10 (1) 00-63: Tenant No. (2) X-XXXXXXXX: Station No. E000: Attendant Console
A		

A	DESCRIPTION	DATA
CM90	<p>If the Attendant Console is assigned as the destination by CM51, assign a Call Forwarding-Intercept (ICPT) key to the console.</p> <p>Assign a Do Not Disturb function key to the Multiline Terminal, if required.</p> <p>Assign Do Not Disturb and Do Not Disturb Override function keys to the DESKCON.</p>	<ul style="list-style-type: none"> Y=00 (1) My Line No. + <input type="text"/> + Key No. (2) F6065: Call Forwarding-Intercept Key <ul style="list-style-type: none"> Y=00 (1) My Line No. + <input type="text"/> + Key No. (2) F0022: Do Not Disturb set/reset <ul style="list-style-type: none"> Y=00 (1) DESKCON No. (E000-E007) + <input type="text"/> + Key No. (2) F6102: Do Not Disturb F6104: Reset
CM08	<p>Specify whether or not to prioritize Station Hunting over Do Not Disturb at receiving an internal incoming call, when the Pilot station of a Station Hunting group is set Do Not Disturb./Specify whether to transfer to the destination of Call Forwarding-Busy Line or of Do Not Disturb by CM51 Y=10, when the station is set Do Not Disturb during setting Call Forwarding-Busy Line.</p> <p>For a system with multiple-tenant, specify the destination of a call transferred in CM51 Y=10.</p>	<ul style="list-style-type: none"> (1) 240 (2) 0 : To prioritize Station Hunting/To the destination of Call Forwarding-Busy Line 1◀: To prioritize Do Not Disturb/To the destination of Do Not Disturb by CM51 Y=10 <ul style="list-style-type: none"> (1) 241 (2) 0 : Tenant of called station 1◀: Tenant of calling station
CM48	<p>Select the Dial Tone on setting Do Not Disturb.</p>	<ul style="list-style-type: none"> Y=2 (1) 14: Dial Tone on setting Do Not Disturb (2) 0 : Special Dial Tone (Stutter Dial Tone) 1◀: Dial Tone
END		

To set an outside party through CCIS as a destination of transferred call

START	DESCRIPTION	DATA
CM11	Assign the Virtual Line station number to the required Port number.	(1) 0000-0999: Virtual Port No. (2) X-XXXXXXXX: Virtual Line Station No.
CM12	Assign Service Restriction Class A to each station.	• Y=02 (1) X-XXXXXXXX: Virtual Line Station No. assigned by CM11 (2) XX ZZ XX: 00-15◀: Service Restriction Class A
CM15	Assign Call Forwarding-All Calls-Outside to Service Restriction Class A assigned by CM12 Y=02.	• Y=026 (1) 00-15: Service Restriction Class A assigned by CM12 Y=02 (2) 1◀: Allowed
CME6	Assign Call Forwarding-All Calls-Outside to the Virtual Line station number assigned by CM11.	• Y=00 Call Forwarding-All Calls (1) X-XXXXXXXX: Virtual Line Station No. assigned by CM11 (2) Destination No.: X-XXXX + [] + YY...Y X-XXXX: Outgoing Trunk (1-4 digits) [] : Separate Mark YY...Y : Called No. (Maximum 26 digits) NONE◀: No data
CM08	For system with multiple-tenant, specify the tenant of calling station as the destination of a call transferred in CM51 Y=10.	(1) 241 (2) 1◀: Tenant of calling station
CM51	Assign the destination of the call when called station is set to Do Not Disturb as Virtual Line station assigned by CM11.	• Y=10 (1) 00-63: Tenant No. (2) X-XXXXXXXX: Virtual Line Station No. assigned by CM11
END		

To set Do Not Disturb Override-CCIS

START	DESCRIPTION	DATA
CM08	Sending the station status type to the destination office when the Multiline Terminal/DESKCON calls a station set the DND over CCIS.	(1) 669 (2) 0 : To send Do Not Disturb setting 1◀: To send the restriction
CM90	Assign the key of Do Not Disturb Override to a Multiline Terminal. Assign the key of Do Not Disturb Override to a DESKCON.	• Y=00 (1) My Line Number + [] + Key No. (2) F1080: Do Not Disturb Override • Y=00 (1) DESKCON No. (E030-E037) + [] + Key No. (2) F6108: Do Not Disturb Override
END		

Operating Procedure

To set Do Not Disturb from a Single-Line Telephone or Multiline Terminal:

1. Lift the handset and receive dial tone.
2. Dial the Do Not Disturb-CCIS feature access code and receive Service Set Tone.
3. Replace the handset.

To cancel Do Not Disturb from a Single-Line Telephone or Multiline Terminal:

1. Lift the handset and receive dial tone.
2. Dial the Do Not Disturb-CCIS cancellation code and receive Service Set Tone.
3. Replace the handset.

To set Do Not Disturb-CCIS from a Multiline Terminal:

1. Press the **Speaker** key and receive dial tone.
2. Press the Do Not Disturb feature key, and the associated LED lights. If the Multiline Terminal is equipped with an LCD, the display will indicate **SET**.
3. Press the **Speaker** key.

To cancel Do Not Disturb-CCIS from a Multiline Terminal:

1. Press the **Speaker** key and receive dial tone.
2. Press the Do Not Disturb feature key, and the associated LED goes out. If the Multiline Terminal is equipped with an LCD, the display will indicate **CNCL**.
3. Press the **Speaker** key.

To operate Do Not Disturb Override-CCIS from a Multiline Terminal:

1. Lift the handset and receive dial tone.
2. Dial the number of the station set to DND.
3. Receive busy tone, and the LED of Do Not Disturb Override feature key flashes. If the Multiline Terminal is equipped with an LCD, the display will indicate DND.
4. Press the Do Not Disturb Override feature key.
5. Receive ring back tone and the station set to DND rings.

NOTE 1: *During on Consultation Hold at overriding station, this feature is not available.*

NOTE 2: *In the case that the station set to DND is talking with another station, the overriding station automatically join the current conversation to form a three party conference.*

DUAL HOLD-CCIS

General Description

This feature allows two connected Multiline Terminals to be placed on hold simultaneously over the CCIS link. This enables the held parties to answer or originate a call from a secondary extension or the idle prime extension.

Programming

START	DESCRIPTION	DATA
CM12	Assign Service Restriction Class B to the required stations.	<ul style="list-style-type: none">Y=02(1) X-XXXXXXXX: Station No.(2) XX ZZ ZZ: 00-15◀: Service Restriction Class B
CM15	Allow Dual Hold in Service Restriction Class B assigned by CM12 Y=02.	<ul style="list-style-type: none">Y=064(1) 00-15: Service Restriction Class B assigned by CM12 Y=02.(2) 1◀: Allow
END		

Operating Procedure

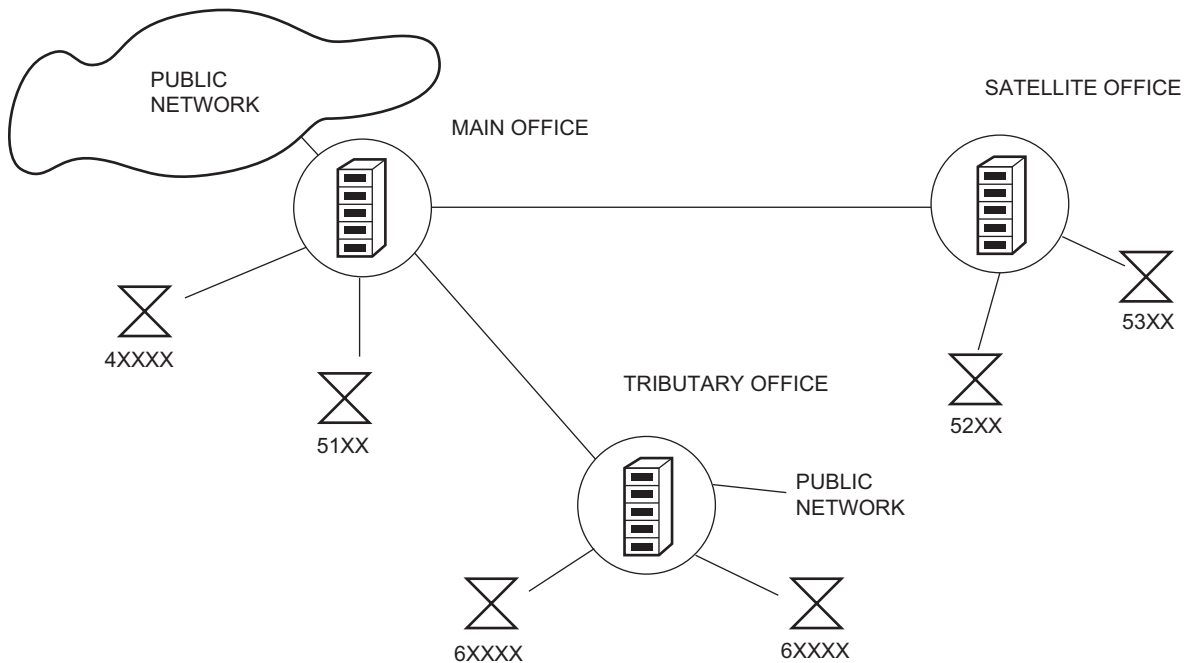
To operate Dual Hold-CCIS from a Multiline Terminal:

1. The user at Station A presses the **Hold** key; the user at Station B is placed on hold.
2. The user at Station B presses the **Hold** key; the user at Station A is placed on hold.
3. Dual Hold-CCIS is now in progress.

FLEXIBLE NUMBERING OF STATIONS-CCIS

General Description

This feature allows voice and data station numbers to be assigned to any instrument in the CCIS network, based solely on numbering plan limitations.



Office location is indicated by all digits of the station number

Programming

START	DESCRIPTION	DATA
CM29	Assign a Numbering Plan Group to each Tenant.	(1) 00-63: Tenant No. (2) 710-713 : Numbering Plan Group 0-3 NONE◀: Numbering Plan Group 0
CM20	Specify the number of digits for station numbers. Example: For setting station number "2XXX" (1) 2 (2) 804 NOTE: <i>Maximum of 6 digits station number should be assigned when providing PMS.</i>	<ul style="list-style-type: none"> Y=0-3 Numbering Plan Group 0-3 (1) X: 1st digit of station No. (2) 801: 1 digit 802: 2 digits 803: 3 digits 804: 4 digits 805: 5 digits 806: 6 digits 807: 7 digits 808: 8 digits
CM05	Assign a Unit number and Slot number to the LC/DLC blade. <div>BLADE RESET</div>	<ul style="list-style-type: none"> Y=0 (1) XX ZZ XX: 01-50: Unit No. ZZ : 01-18: Slot No. (2) 10: DLC blade 20: LC blade
CM10	Assign station number to the required Physical Port number according to the Numbering Plan specified by CM20.	<ul style="list-style-type: none"> Y=00 (1) XX YY ZZ: Physical Port No. XX: 01-50: Unit No. YY: 01-18: Slot No. ZZ : 01-32: Circuit No. (2) X-XXXXXXXX: Station No.
END		

Operating Procedure

No manual operation is required.

HOT LINE-CCIS

General Description

This feature allows two stations, at different nodes in the CCIS network, to be mutually associated on an automatic ring down basis through the CCIS network.

Programming

To use the Hot Line-Outside feature:

START	DESCRIPTION	DATA								
CM12	Assign a Hot Line to the required stations.	<ul style="list-style-type: none">Y=03 <p>(1) X-XXXXXXXX: Station No. (2) 04: Hot Line</p>								
CM71	Allocate memory area Hot Line-Outside calls. For example, to assign 10 Hot Line-Outside calls into No. 100 through No. 109 Memory Slots, 2nd data is “100010”. Abbreviated Codes are automatically assigned as shown below:	<p>(1) 65: For Hot Line-Outside (2) XXX ZZZ XXX: 000-299: Stating Memory Slot No. in Block ZZZ : 001-300: Number of Slots to be assigned in Block</p>								
	<table><tr><th></th><th>Abbrev. Codes</th></tr><tr><td>Memory Slot 100</td><td>00</td></tr><tr><td>}</td><td>}</td></tr><tr><td>Memory Slot 109</td><td>09</td></tr></table>		Abbrev. Codes	Memory Slot 100	00	}	}	Memory Slot 109	09	
	Abbrev. Codes									
Memory Slot 100	00									
}	}									
Memory Slot 109	09									
CM72	Assign the Called Party number to each Memory Slot number for Hotline.	<ul style="list-style-type: none">Y=0 <p>(1) 000-299: Memory Slot No. (2) XXXX [] YY...Y XXXX : Access Code (Maximum 4 digits) [] : Separator Mark YY...Y : Called Party No. (Maximum 26 digits)</p>								
CM52	Define the Hot Line pairs.	<ul style="list-style-type: none">Y=00-99 Hot Line Pair No. <p>(1) 0: Calling Side 1: Called Side (2) C XX for Called Side party XX: 00-09: Abbreviated Code exclusively for Hotline-Outside call assigned by CM71>65</p>								
A										

	DESCRIPTION	DATA
<div style="text-align: center;">A</div> <div style="border: 1px solid black; padding: 2px; margin: 5px auto; width: 60px;">CM08</div> <div style="text-align: center;">END</div>	<p>Specify the result of Switch Hook Flash on Hot Line station.</p> <p>To allow Hot Line stations to transfer a call or access a feature, set the data to "0".</p>	<p>(1) 057</p> <p>(2) 0 : Special Dial Tone</p> <p>1◀: Attendant Recall</p>

To use the Delayed Hot Line-Outside feature:

START	DESCRIPTION	DATA
<div style="border: 1px solid black; padding: 2px; margin: 5px auto; width: 60px;">CM12</div>	Assign a Delayed Hotline to the required stations.	<ul style="list-style-type: none"> Y=03 <p>(1) X-XXXXXXXX: Station No.</p> <p>(2) 09: Delayed Hotline</p>
<div style="border: 1px solid black; padding: 2px; margin: 5px auto; width: 60px;">CM41</div>	Specify the Delayed Hotline activation timer.	<ul style="list-style-type: none"> Y=0 <p>(1) 119</p> <p>(2) 01-30: 1-30 seconds (1 second increment)</p> <p>If no data is set, the default setting is 10 seconds.</p>
<div style="border: 1px solid black; padding: 2px; margin: 5px auto; width: 60px;">CM52</div>	<p>Define the Delayed Hotline pairs.</p> <p>NOTE: Do not assign station number with first digit "0".</p>	<ul style="list-style-type: none"> Y=00-99 Delayed Hotline Pair No. <p>(1) 0: Calling Side</p> <p>(2) X-XXXXXXXX: Station No.</p> <p>(1) 1: Called Side</p> <p>(2) X-XXXXXXXX: Station No.</p> <p>CXX : Trunk Outgoing Call</p> <p>XX : Abbreviated Code exclusively for Delayed Hotline-Outside call assigned by CM71>65</p>
<div style="text-align: center;">A</div>		

A

DESCRIPTION

DATA

CM71

Allocate the memory area for the Delayed Hotline-Outside call. For example, to assign the 10 Delayed Hotline-Outside calls into No. 100 through No. 109 Memory Slots, 2nd data is "100010". Abbreviated Codes are automatically assigned as shown below:

	Abbreviated Code
Memory Slot 100	00
∫	∫
Memory Slot 109	09

- (1) 65: For Delayed Hotline-Outside
- (2) XXX YYY
 XXX: 000-299: Starting Memory Slot No.
 in blocks
 YYY: 001-300: Number of Memory Slots
 to be assigned in blocks

CM72

Set the Called Party number to each Memory Slot number for Delayed Hotline.

- Y=0
 - (1) 000-299: Memory Slot No.
 - (2) XXXX + [] + YY...Y: Called Party No.
 XXXX : Access Code (Maximum 4 digits)
 [] : Separator Mark
 YY...Y : Called Party No. (Maximum 26 digits)
 NONE◀: No data

- Y=1
 - (1) 000-299: Memory Slot No.
 - (2) XXX...X: Called Party Name Character Code (Maximum 32 digits: 16 characters)
 NONE◀: No data
 See Command Manual.

- Y=2
 - (1) 000-299: Memory Slot No.
 - (2) XXX...X: Called Party Name Character by PCPro/CAT (Maximum 16 characters)
 NONE◀: No data

CM08

Specify the result of Switch Hook Flash on Hot Line station.
 To allow Hot Line stations to transfer a call or access a feature, set the data to "0".

- (1) 057
- (2) 0 : Special Dial Tone
 1◀: Attendant Recall

END

Operating Procedure

To place a Hot Line-CCIS call:

1. The user at Station A lifts the handset.
2. Station B is rung.
3. The user at Station B lifts the handset and the connection is established.

HOUSE PHONE-CCIS

General Description

This feature allows selected stations to call an Attendant Console, through the CCIS network, simply by going off-hook.

Programming

START	DESCRIPTION	DATA								
CM12	Assign a Hot Line (House-phone) to the required station.	<ul style="list-style-type: none"> Y=03 (1) X-XXXXXXXX: Station No. (2) 04: Hot Line (House-phone)								
CM71	Allocate memory area for Hot Line-Outside calls. For example, to assign 10 Hot Line-Outside calls into No. 100 through No. 109 Memory Slots, 2nd data is "100010." Abbreviated Codes are automatically assigned as shown below: <table> <tr> <th></th> <th><u>Abbrev. Codes</u></th> </tr> <tr> <td>Memory Slot 100</td> <td><u>00</u></td> </tr> <tr> <td>⋮</td> <td>⋮</td> </tr> <tr> <td>Memory Slot 109</td> <td><u>09</u></td> </tr> </table>		<u>Abbrev. Codes</u>	Memory Slot 100	<u>00</u>	⋮	⋮	Memory Slot 109	<u>09</u>	(1) 65: For Hot Line-Outside (2) XXX ZZZ XXX: 000-299 (Starting Memory Slot No. in blocks) ZZZ : 001-300 (No. of Memory Slots to be assigned in blocks)
	<u>Abbrev. Codes</u>									
Memory Slot 100	<u>00</u>									
⋮	⋮									
Memory Slot 109	<u>09</u>									
CM72	Assign the Called Party number to each Memory Slot number for Hotline.	<ul style="list-style-type: none"> Y=0 (1) 000-299: Memory Slot No. (2) XXXX , YY...Y XXXX : Access Code (Maximum 4 digits) , : Separator Mark YY...Y : Called Party No. (Maximum 26 digits)								
CM52	Define the Hot Line (House-phone) pairs.	<ul style="list-style-type: none"> Y=00-99 Hot Line Pair No. (1) 0: Calling Side (2) X-XXXXXXXX: Virtual Station No. (1) 1: Called Side (2) C XX for Called Side party XX: 00-09: Abbreviated Code exclusively for Hotline-Outside call assigned by CM71>65								
END										

Operating Procedure

To call an Attendant in another office:

1. The House Phone-CCIS user lifts the handset.
2. The Attendant in another office is automatically called. The **ATND** lamps on the Attendant Console flash and the console buzzer sounds.

INCOMING CALL IDENTIFICATION-CCIS

General Description

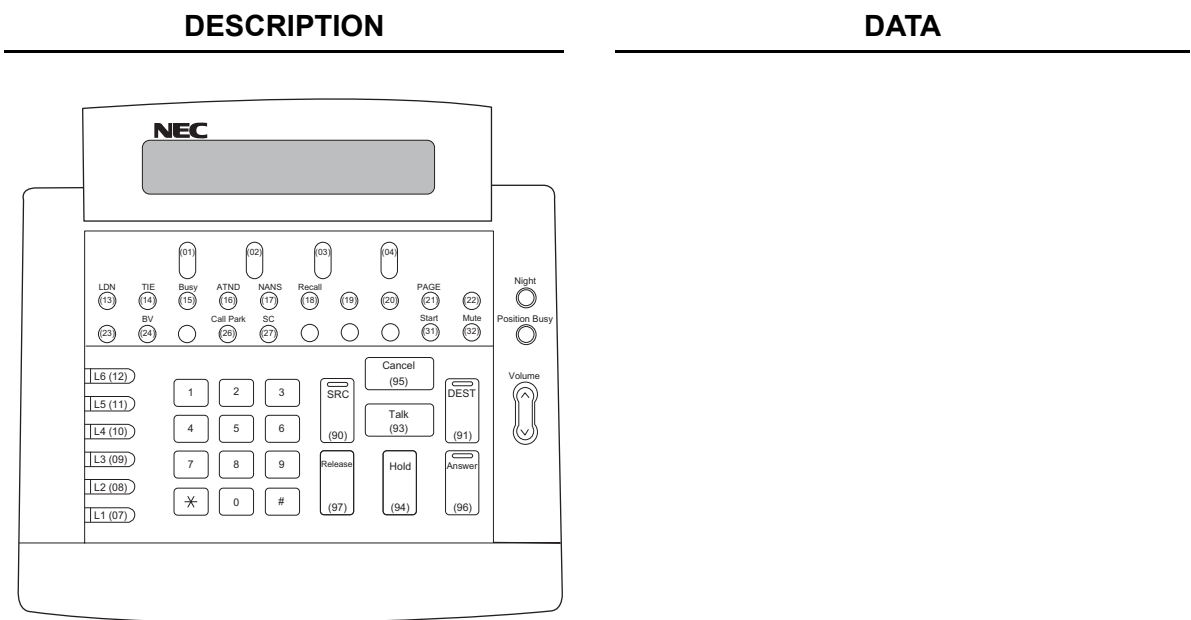
This feature allows an Attendant to visually identify the type of service and/or trunk group which is arriving or waiting to be answered at the Attendant Console through the CCIS network.

Programming

START	DESCRIPTION	DATA
CM35	Specify the ICI key to which an incoming call from each trunk route terminates.	<ul style="list-style-type: none">Y=015(1) 00-63: Trunk Route No.(2) 75: No. 7 CCIS Call
CM90	Assign the required Attendant Call Selection keys and DESKCON Function keys to each DESKCON, according to the Key label.	<ul style="list-style-type: none">Y=00(1) DESKCON No. (E000-E007) + <input type="text"/> + Key No.(2) F6000-F6068: Type of Calls to be assigned F6100-F6245: Functions to be assigned
A		

A

CM90



Key No.	Data	Description (Key Label)
13	F6000	C.O. Incoming 0 (LDN)
14	F6040	Tie Line Incoming 0 (TIE)
15	F6064	Call Forwarding-Busy Line (Busy)
16	F6060	Operator Call (ATND)
17	F6063	Call Forwarding-No Answer (NANS)
18	F6061	Recall (Recall)
21	F6150	Paging (PAGE)
24	F6107	Busy Verification (BV)
90	F6200	Source (SRC)
91	F6201	Destination (DEST)
93	F6203	Talk (Talk)
94	F6204	Hold (Hold)
95	F6202	Cancel (Cancel)
96	F6252	Answer (Answer)
97	F6253	Release (Release)

NOTE: When the DESKCON is used to set H/M features, the Reset key should be assigned to one of the feature keys (i.e key 21) in the Idle state mode.

END

Operating Procedure

No manual operation is required.

LDN NIGHT CONNECTION-CCIS

General Description

This feature routes Listed Directory Number (LDN) calls to a preselected station, in the CCIS network, when the Night Mode has been entered.

Programming

START	DESCRIPTION	DATA
CM08	Provide the system with Diversion Display.	(1) 204 (2) 0: To provide
CM35	Specify the Incoming Call Identification (ICI) key to which each LDN call from each trunk route will terminate.	<ul style="list-style-type: none"> Y=015 (1) 00-63: Trunk Route No. (2) 00-07: C.O. Incoming Call 0-7
CM90	Assign the required number of LDN keys as ICI keys.	<ul style="list-style-type: none"> Y=00 (1) E00X + + 13-18 (Key No.) X: DESKCON No. (2) F6000-F6007: LDN 0-7
CM50	Assign the indialed number to each LDN key assigned by CM90. The indialed number should be different from any numbers assigned by CM10 and CM11.	<ul style="list-style-type: none"> Y=01 For DID (1) 0 : Effective data in CM35 Y=015 1-8: LDN Key 0-7 assigned by CM90 (2) X-XXXX: Indialed No.
END		

To provide the LDN Diversion feature, the following programming is also required.

START	DESCRIPTION	DATA
CM08	Provide the system with the LDN Diversion feature.	(1) 205 (2) 0: To provide
CM58	Assign the data for LDN Diversion to each indialled number assigned by CM50 Y=01. Note that a call is diverted to LDN 0-7 keys as specified by CM58 Y=02-07, even if CM50 Y=01, 1-8 has already been set.	<ul style="list-style-type: none"> Y=00 Tenant No. of the LDN assigned by CM50 Y=01 (1) 00 : Effective data in CM35 Y=015 01-08: LDN key 0-7 assigned by CM90 (2) 00-63: Tenant No. <ul style="list-style-type: none"> Y=01 TAS Group No. assigned by CM44>13 (1) Same as CM58 Y=00 (2) 00-63: TAS Group No. <ul style="list-style-type: none"> Y=02 Day Mode destination of the LDN (1) Same as CM58 Y=00 (2) 00-07: LDN key 0-7 08 : To TAS 09 : To station/outside party assigned by CM58 Y=08 <ul style="list-style-type: none"> Y=03 Night Mode destination (1) Same as CM58 Y=00 (2) 00-07: LDN key 0-7 08 : To TAS 09 : To station/outside party assigned by CM58 Y=09 <ul style="list-style-type: none"> Y=04 Day Mode diversion for busy destination station (1) Same as CM58 Y=00 (2) 00: To Attendant Console Busy key 08: To TAS 09: Camped on <ul style="list-style-type: none"> Y=05 Night Mode diversion for busy destination station (1) Same as CM58 Y=00 (2) Same as CM58 Y=04
A		

A	DESCRIPTION	DATA
CM58	If the 2nd data (09) is designated by CM58 Y=02, 03, assign the station/outside party number to be diverted.	<ul style="list-style-type: none"> Y=06 Day Mode diversion for non-answering destination station <ol style="list-style-type: none"> Same as CM58 Y=00 00: To Attendant Console NANS key 08: To TAS Y=07 Night Mode diversion for non-answering destination station <ol style="list-style-type: none"> Same as CM58 Y=00 Same as CM58 Y=06 Y=08 Day Mode destination station/outside party <ol style="list-style-type: none"> Same as CM58 Y=00 X-XXXXXXXX: Station No. CXX: Abbreviated Code for Outside Party XX : 00-31: Abbreviated Code Y=09 Night Mode destination station/outside party <ol style="list-style-type: none"> Same as CM58 Y=00 X-XXXXXXXX: Station No. CXX: Abbreviated Code for Outside Party XX : 00-31: Abbreviated Code
CM36	If the 2nd data (CXX) is designated by CM58 Y=08, 09, specify the combination of trunk routes allowing the Tandem connection.	<ul style="list-style-type: none"> Y=0 <ol style="list-style-type: none"> XX ZZ XX: 00-63: Incoming Trunk Route ZZ : 00-63: Outgoing Trunk Route for CCIS 0: Allow
CM71	If the 2nd data (CXX) is designated by CM58 Y=08, 09, assign the System Speed Dialing memory area exclusively for LDN-Outside.	<ol style="list-style-type: none"> 66: Exclusive for LDN-Outside XXX ZZZ XXX : 000-299: Starting Memory Slot No. in Block ZZZ : 001-300: Number of Slots to be assigned in Block NONE◀: No data
B		

	DESCRIPTION	DATA
<div>B</div> <div>CM72</div> <div>END</div>	Set the stored number to the Memory Slot number allocated by CM71.	<ul style="list-style-type: none"> Y=0 (1) 000-299: Memory Slot No. (2) XXXX <div>,</div> YY...Y XXXX : Access Code (Maximum 4 digits) <div>,</div> : Separator Mark YY...Y : Called Party No. (Maximum 26 digits)

Operating Procedure

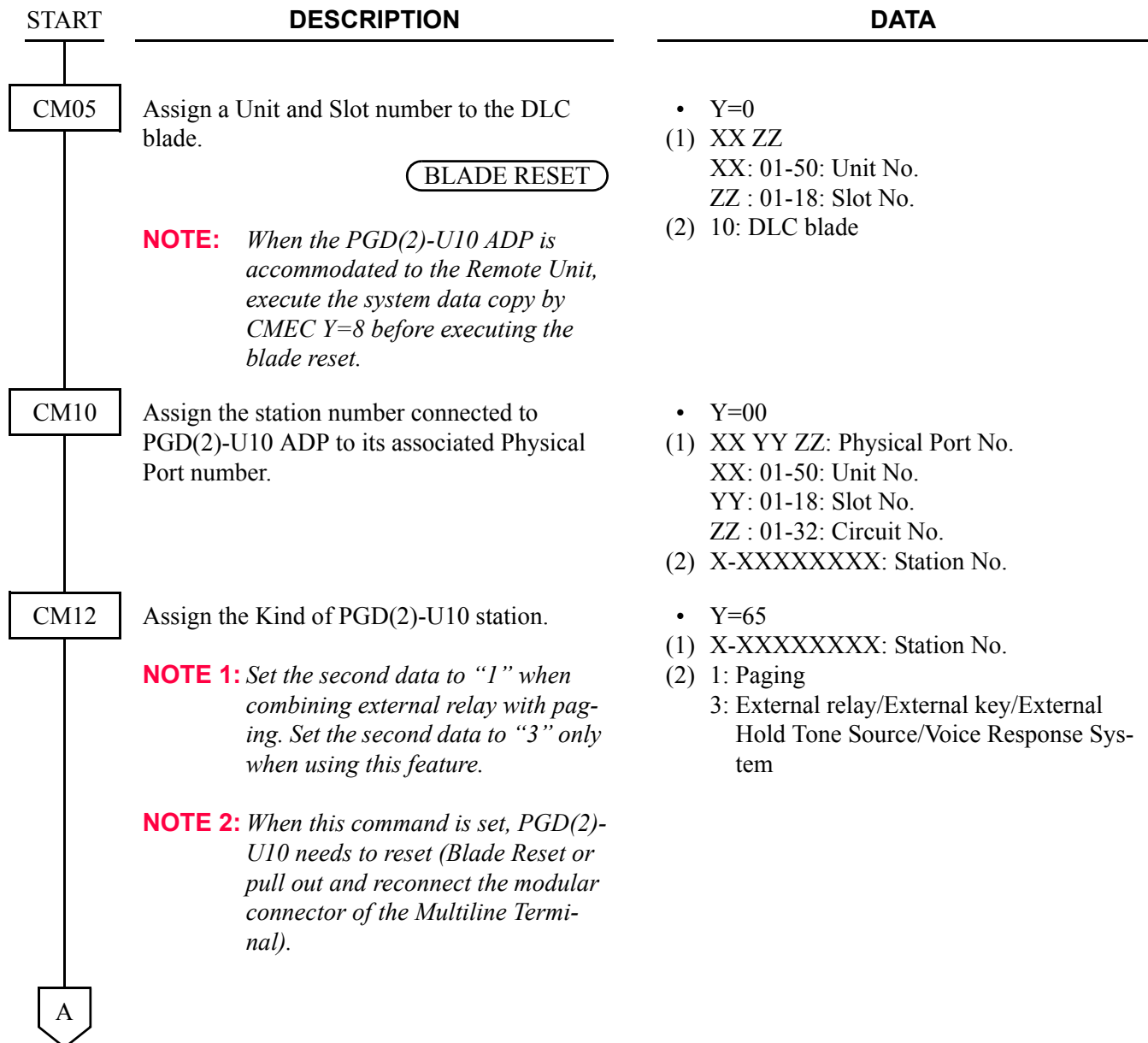
No manual operation is required.

LINK ALARM DISPLAY-CCIS

General Description

This feature provides an indication on external equipment when the CCIS link is connected/disconnected, when the system is initialized.

Programming



A

CM13

DESCRIPTION

DATA

For the station connected to PGD(2)-U10 ADP, set the Message Waiting/Stored Call Record lamps not to be lit.

- Y=03
- (1) X-XXXXXXXXX: Station No.
- (2) 1: Not provided

For the station connected to PGD(2)-U10 ADP, set the call history not to be stored when answering a station call.

- Y=41
- (1) X-XXXXXXXXX: Station No.
- (2) 1: Not stored

For the station connected to PGD(2)-U10 ADP, set the call history not to be stored when handling an unanswered station call.

- Y=49
- (1) X-XXXXXXXXX: Station No.
- (2) 1: Not stored

For the station connected to PGD(2)-U10 ADP, set the call history not to be stored when answering a trunk call.

- Y=60
- (1) X-XXXXXXXXX: Station No.
- (2) 1: Not stored

For the station connected to PGD(2)-U10 ADP, set the call history not to be stored when handling an unanswered trunk call.

- Y=61
- (1) X-XXXXXXXXX: Station No.
- (2) 1: Not stored

Allow the accommodation of PGD(2)-U10 ADP.

- Y=63
- (1) X-XXXXXXXXX: Station No.
- (2) 0 : To accommodate
- 1 : Not accommodated

BLADE RESET

NOTE 1: Set this data only for a Base Port of DLC blade.

NOTE 2: Whether the following equipment can be accommodated to the same DLC blade or not depends on this data.

- When the second data is set to "0"

Accommodatable : DT300/DT400/D^{term}85/PGD(2)-U10 ADP

Unaccommodatable: DESKCON/DSS Console

- When the second data is set to "1"

Accommodatable : DT300/DT400/D^{term}85/DESKCON/DSS Console

Unaccommodatable: PGD(2)-U10 ADP

NOTE 3: When the second data is set to 0, and accommodating DT300/DT400 Series DESI-less to the same DLC blade to which PGD(2)-U10 ADP is accommodated, the Line Key of the DT300/DT400 Series DESI-less does not light up (however, Character Display or Icon Display on the DESI-less screen is provided).

B

	DESCRIPTION	DATA
<div>B</div> <div>CM44</div> <div>END</div>	<p>Assign the function of CCIS Link Alarm Indication to the PGD(2)-U10 ADP.</p> <p>Associate the PGD(2)-U10 station number with the Relay Group number.</p>	<ul style="list-style-type: none"> Y=00 <p>(1) XX Y XX: 00-31: Relay Group No. Y : 0-3: Circuit No.</p> <p>(2) 35 XX XX: 00-15: CCIS CH No.</p> <ul style="list-style-type: none"> Y=01 <p>(1) 00-31: Relay Group No.</p> <p>(2) X-XXXXXXXX: PGD(2)-U10 Station No. NONE◀: No data</p>

Hardware Required

PGD(2)-U10 ADP

External Indicator (Bell, Lamp etc.) provided by the customer

For the cross connection of External Indicator, refer to System Hardware Manual.

Operating Procedure

No manual operation is required.

LINK RECONNECT-CCIS

General Description

This feature provides the system connected to CCIS network with the capability to release the redundant CCIS link connection and re-connect the link within the system for efficient usage of the CCIS links.

Station Application

Not Applicable

Programming

START

DESCRIPTION

DATA

CM08

Provide the Link Reconnect-CCIS.

(1) 606
(2) 1 ◀: To provide

Provide the CCIS link reconnection when a call is connected to the UCD Delay Announcement (for incoming trunk call) via CCIS.

(1) 607
(2) 0: To provide

Provide the Link Reconnect-Peer-to-Peer CCIS.

(1) 628
(2) 1 ◀: To provide

NOTE: The validity of the Link Reconnect-CCIS by the combination of CM08>606, 607 and 628 is as follows.

For No.7 CCIS network:

◀: Default

	CM08>606	CM08>607
To provide Link Reconnect-CCIS only	1 ◀	1 ◀
To provide Link Reconnect-CCIS and Link Reconnect-CCIS in UCD Delay Announcement (for incoming trunk call) via CCIS	1 ◀	0
Not to provide Link Reconnect-CCIS and Link Reconnect-CCIS in UCD Delay Announcement (for incoming trunk call) via CCIS	0	Setting invalid

A

A

DESCRIPTION

DATA

CM08

For IPT (P2P CCIS) network:

◀: Default

	CM08>606	CM08>607	CM08>628
To provide Link Reconnect-CCIS only	1 ◀	1 ◀	1 ◀
To provide Link Reconnect-CCIS and Link Reconnect-CCIS in UCD Delay Announcement (for incoming trunk call) via CCIS	1 ◀	0	1 ◀
Not to provide Link Reconnect-CCIS and Link Reconnect-CCIS in UCD Delay Announcement (for incoming trunk call) via CCIS	0	Setting invalid	Setting invalid

END

Operating Procedure

No manual operation is required.

MESSAGE WAITING LAMP SETTING-ATTENDANT-CCIS

General Description

This feature allows the system to set or cancel the Message Waiting Lamp Indication from the Attendant Console of 2400 IPX through the CCIS network.

NOTE: *As for the system data assignments and operating procedures for 2400 IPX, refer to the each manual of 2400 IPX.*

Programming

START	DESCRIPTION	DATA
CM13	Provide each station with Message Waiting service.	<ul style="list-style-type: none"> Y=03 (1) X-XXXXXXXX: Station No. (2) 0: To provide
	NOTE: <i>This command is effective only when using a Single Line Telephone with MW lamp, Standard SIP Terminal.</i>	
CM12	Assign Service Restriction Class C to each station.	<ul style="list-style-type: none"> Y=07 (1) X-XXXXXXXX: Station No. (2) 00-15: Service Restriction Class C
CM15	Specify if MW lamp on Multiline Terminal when Message Waiting is to be lit.	<ul style="list-style-type: none"> Y=286 (1) 00-15: Service Restriction Class C assigned by CM12 Y=07 (2) 0 : Not lit 1◀: To light
	NOTE: <i>This command is effective only when using the Multiline Terminal.</i>	
END		

Hardware Required

To provide a Single-Line Telephone with Message Waiting lamp and a Multiline Terminal:

- LC (GCD-4LCF/GCD-8LCF) blade

Operating Procedure

To set a Message Waiting indication:

1. Press an idle **LOOP** key and receive dial tone.
2. Dial the Message Waiting feature access code (maximum of three digits) and receive Feature Dial Tone.
3. Dial the station number and receive Service Set Tone.
4. Message Waiting indication is set.
5. Press the **RELEASE** key to return to an idle condition.

To cancel a Message Waiting indication:

1. Press an idle **LOOP** key and receive dial tone.
2. Dial the Message Waiting cancellation code (maximum of three digits) and receive Feature Dial Tone.
3. Dial the station number and receive Service Set Tone.
4. Message Waiting indication is canceled.
5. Press the **CANCL** key to return to an idle condition.

MESSAGE WAITING LAMP SETTING-STATION-CCIS

General Description

This feature allows the system to set or cancel the Message Waiting Lamp Indication from the station of 2400 IPX through the CCIS network.

NOTE: *As for the system data assignments and operating procedures for 2400 IPX, refer to the each manual of 2400 IPX.*

Programming

START	DESCRIPTION	DATA
CM13	Provide each station with Message Waiting service.	<ul style="list-style-type: none">Y=03(1) X-XXXXXXXX: Station No.(2) 0: To provide
	NOTE: <i>This command is effective only when using a Single Line Telephone with MW lamp, Standard SIP Terminal.</i>	
CM12	Assign Service Restriction Class C to each station.	<ul style="list-style-type: none">Y=07(1) X-XXXXXXXX: Station No.(2) 00-15: Service Restriction Class C
CM15	Specify if MW lamp on Multiline Terminal when Message Waiting is to be lit.	<ul style="list-style-type: none">Y=286(1) 00-15: Service Restriction Class C assigned by CM12 Y=07(2) 0 : Not lit1◀: To light
	NOTE: <i>This command is effective only when using the Multiline Terminal.</i>	
END		

Hardware Required

To provide a Single-Line Telephone with Message Waiting lamp and a Multiline Terminal:

- LC (GCD-4LCF/GCD-8LCF) blade

Operating Procedure

To set a Message Waiting indication:

1. Lift the handset and receive dial tone.
2. Dial the Message Waiting feature access code (maximum of three digits) and receive Feature Dial Tone.
3. Dial the desired station number and receive Service Set Tone.
4. Message Waiting indication is set at the station.

To cancel a Message Waiting indication:

1. Lift the handset and receive dial tone.
2. Dial the Message Waiting cancellation code (maximum of three digits) and receive Feature Dial Tone.
3. Dial the desired station number and receive Service Set Tone.
4. Message Waiting indication at station is canceled.

MISCELLANEOUS TRUNK ACCESS-CCIS

General Description

This feature provides access to all types of external and customer-provided equipment/facilities, such as Tie Line and exchange network, along with Dictation, Paging Access-CCIS and Code Calling through the CCIS network.

Programming

Refer to Numbering Plan Assignment and assign the trunk access code using the LCR feature.

Operating Procedure

No manual operation is required.

MISCELLANEOUS TRUNK RESTRICTION-CCIS

General Description

This feature denies certain stations and dial-repeating tie trunks access to specific trunk groups, such as Tie Line, exchange network, Dictation or Paging Access-CCIS through the CCIS network.

Programming

Assign “1” (Restricted) as the 2nd Data of CM36 when programming the “DELUXE TRAVELING CLASS MARK-CCIS”. [📄 Page 1-147](#)

Operating Procedure

No manual operation is required.

MULTIPLE CONSOLE OPERATION-CCIS

General Description

This feature provides console operation where Attendant Consoles are installed in more than one node in the CCIS network.

Station Application

Attendant Console

Programming

START	DESCRIPTION	DATA
CM05	Assign a Unit number and Slot number to the DLC blade. BLADE RESET	<ul style="list-style-type: none"> Y=0 <ol style="list-style-type: none"> XX ZZ XX: 01: Unit No. ZZ : 01-18: Slot No. 10: DLC blade
	<p>NOTE 1: Attendant Consoles can only be accommodated to Unit01.</p> <p>NOTE 2: A maximum of 2 Attendant Consoles can be accommodated per DLC blade (A maximum of 8 Attendant Consoles can be accommodated in system).</p>	
CM10	Assign the DESKCON No. for the appropriate Physical Port number. BLADE RESET	<ul style="list-style-type: none"> Y=00 <ol style="list-style-type: none"> XX YY ZZ: Physical Port No. XX: 01: Unit No. YY: 01-18: Slot No. ZZ : 01-32: Circuit No. E000-E007: DESKCON No.
	<p>NOTE 1: A blade reset is also required when adding Attendant Consoles to the existing DLC blade.</p> <p>NOTE 2: If the PGD(2)-U10 ADP is accommodated to the DLC blade (the second data of CM13 Y=63 is set to "0"), Attendant Consoles cannot be accommodated to the same DLC blade.</p>	
A		

	DESCRIPTION	DATA
<div><div>A</div><div>CM30</div><div></div><div>CM90</div><div></div><div>B</div></div>	<p>Set the terminating system for the incoming calls to DESKCON.</p> <p>Assign the required Attendant Call Selection keys, and Function keys to each DESKCON. If no data is set, the default setting is as next page.</p>	<ul style="list-style-type: none">Y=02 Day ModeY=03 Night ModeY=40 Mode AY=41 Mode B <p>(1) 000-511: Trunk No. (2) 14: Attendant Console</p> <ul style="list-style-type: none">Y=00 <p>(1) DESKCON No. (E000-E007) + <input type="text"/> + Key No. (2) F6000-F6068: Type of Calls to be assigned F6100-F6245: Functions to be assigned</p>

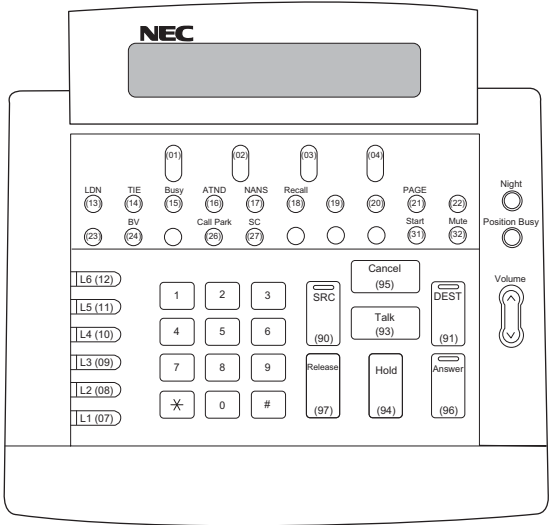
B

DESCRIPTION

DATA

CM90

- For SN716 DESKCON



Key No.	Data	Description (Key Label)
13	F6000	C.O. Incoming 0 (LDN)
14	F6040	Tie Line Incoming 0 (TIE)
15	F6064	Call Forwarding-Busy Line (Busy)
16	F6060	Operator Call (ATND)
17	F6063	Call Forwarding-No Answer (NANS)
18	F6061	Recall (Recall)
21	F6150	Paging (PAGE)
24	F6107	Busy Verification (BV)
90	F6200	Source (SRC)
91	F6201	Destination (DEST)
93	F6203	Talk (Talk)
94	F6204	Hold (Hold)
95	F6202	Cancel (Cancel)
96	F6252	Answer (Answer)
97	F6253	Release (Release)

NOTE: When the DESKCON is used to set H/M features, the Reset key should be assigned to one of the feature keys (i.e key 21) in the Idle state mode.

C

C	DESCRIPTION	DATA
CM60	Allocate the ATT Group number to each DESKCON.	<ul style="list-style-type: none"> Y=00 (1) 0-7: DESKCON No. (2) 0-3: ATT Group 0-3
	NOTE: <i>A reset by CM60 Y=90>0: 0 is required after this data setting.</i>	
	Specify the Master DESKCON within the ATT Group assigned by CM60 Y=00.	<ul style="list-style-type: none"> Y=01 (1) 0-7: DESKCON No. (2) 0 : Master ATT 1◀: Not Master ATT
	NOTE 1: <i>Assign one Master DESKCON for each ATT Group.</i>	
	NOTE 2: <i>Even if an ATT Group consists of only one DESKCON, specify the DESKCON as a Master DESKCON.</i>	
	NOTE 3: <i>A reset by CM60 Y=90>0: 0 is required after this data setting.</i>	
	When providing 2nd Ringing feature on the DESKCON, make Off-Hook Ringing effective.	<ul style="list-style-type: none"> Y=16 (1) 0-7: DESKCON No. (2) 0: Effective
	NOTE: <i>A reset by CM60 Y=90>0: 0 is required after this data setting.</i>	
	Allow or restrict the system to keep the volume level changed by the volume button on DESKCON, after the call is finished.	<ul style="list-style-type: none"> Y=23 (1) 0-7: DESKCON No. (2) 0 : Allow 1◀: Restricted
	NOTE: <i>A reset by CM60 Y=90>0: 0 is required after this data setting.</i>	
CM62	Specify the tenants to be handled by each ATT Group.	<ul style="list-style-type: none"> Y=0-3 ATT Group 0-3 (1) 00-63: Tenant No. (2) 0 : To handle 1◀: Not handled
D	NOTE: <i>A reset by CM60 Y=90>0: 0 is required after this data setting.</i>	

D	DESCRIPTION	DATA
CM04	Display language to display on LCD. (System base)	<ul style="list-style-type: none"> • Y=00 (1) 00 (2) 00 : Japanese 01 : English 02 : French (Canadian French) 03 : Spanish (Latin Spanish) 04 : Portuguese (Brazilian Portuguese) 05 : German 06 : Italian 07 : Netherlandish 08 : French (Europe) 09 : Spanish (Europe) 10 : Portuguese (Europe) 11 : Swedish 12 : Danish 13 : Catalan 15 : Russian 16 : Turkish 31◀: English
	<p>NOTE 1: After changing this data, the assigned data is reflected to each Multiline Terminal by resetting the terminal (i.e. unplug the modular connector of the terminal and then plug it again, or eject the DLC Card and then insert it again) or executing CM12 Y=29.</p> <p>NOTE 2: Russian (2nd data=15) and Turkish (2nd data=16) cannot be displayed on DESKCON LCD.</p>	
CM12	Make the LCD display settings to be applied to each Multiline Terminal in the system.	<ul style="list-style-type: none"> • Y=29 (1) X-XXXXXXXX: Station No. (2) 0: To execute
<p>NOTE: When this data is set to 0 (To execute) after changing any system data relating to the LCD display of Multiline Terminal, the changes are reflected to the Multiline Terminal. After the reflection is completed, this data returns to 1 (Not executed).</p>		
END		

Operating Procedure

No manual operation is required.

NIGHT CONNECTION-FIXED-CCIS

General Description

This feature routes calls normally directed to the Attendant Console to a preselected station in another office, through the CCIS network, when the Night mode has been entered.

Programming

Refer to “DIRECT-IN TERMINATION-CCIS”.  [Page 1-156](#)

Operating Procedure

To answer a Night Connection-Fixed-CCIS call:

1. An incoming call to the Attendant Console in Night mode is automatically transferred to a preselected Night Connection station belonging to a different office.
2. The calling party hears ring back tone.
3. Ring signal is sent to the Night Connection station.
4. The Night Connection station lift the handset to answer the incoming call.

NIGHT CONNECTION-FLEXIBLE-CCIS

General Description

This feature provides an inter-office night connection service, via the CCIS network, when the calling station and the night station belong to different offices.

Programming

Refer to “DIRECT-IN TERMINATION-CCIS”.  [Page 1-156](#)

Operating Procedure

To set the Night Connection-Flexible-CCIS:

1. The Attendant or fixed night station user in the destination office sets Call Forwarding-All Calls-CCIS to a station in another office.

To answer Night Connection-Flexible-CCIS calls:

1. In the Night mode, incoming calls to the Attendant Console are automatically transferred to a pre-selected Night Connection station belonging to a different office.
2. The calling party hears ring back tone.
3. Ring signal is sent to the Night Connection station.
4. The Night Connection station lift the handset to answer the incoming call.

OUTGOING TRUNK QUEUING-CCIS

General Description

This feature allows a CCIS network station, upon encountering an all trunks busy signal, to dial a specified access code and enter a first-in, first-out queue. As soon as a CCIS trunk becomes available, stations in the queue will be called back on a first-come, first-served basis.

NOTE: *This feature applies to the tie line trunks between the two PBX systems and not to the outgoing trunks at the remote PBX.*

Programming

START	DESCRIPTION	DATA
CM12	Assign Service Restriction Class A to the required stations.	<ul style="list-style-type: none">Y=02(1) X-XXXXXXXX: Station No.(2) XX ZZ XX: 00-15◀: Service Restriction Class A
CM15	Allow Outgoing Trunk Queuing in Service Restriction Class A assigned by CM12 Y=02.	<ul style="list-style-type: none">Y=002(1) 00-15: Service Restriction Class A assigned by CM12 Y=02(2) 1◀: Allow
CM20	Assign access code for setting and resetting this service.	<ul style="list-style-type: none">Y=0-3 Numbering Plan Group 0-3(1) X-XXXX: Access Code(2) A004: Set A005: Reset
CM90	Assign the Trunk Queuing-OG (Call Back) key to the required Multiline Terminal.	<ul style="list-style-type: none">Y=00(1) My Line No. + + Key No.(2) F0004
CM35	Specify the Trunk Queuing-Outgoing capability to each trunk route.	<ul style="list-style-type: none">Y=028(1) 00-63: Trunk Route No.(2) 0 : Restricted 1◀: Allow
END		

Operating Procedure

To activate Outgoing Trunk Queuing-CCIS:

1. Dial the trunk access code and receive dial tone.
2. Dial the desired number and receive busy tone.
3. Press the hookswitch momentarily and receive Feature Dial Tone.
4. Dial the Outgoing Trunk Queuing-CCIS feature access code and receive Service Set Tone.
5. Replace the handset.

To cancel Outgoing Trunk Queuing-CCIS:

1. Dial the Outgoing Trunk Queuing-CCIS cancellation code and receive Service Set Tone.

PAGING ACCESS-CCIS

General Description

This feature provides dial access to paging equipment from an Attendant Console or station, through the CCIS network. For details of the programming, refer to External Paging with Meet-Me of Programming Manual.

Programming

START	DESCRIPTION	DATA
CM05	Assign a Unit and Slot number to the DLC blade. BLADE RESET NOTE: <i>When the PGD(2)-U10 ADP is accommodated to the Remote Unit, execute the system data copy by CMEC Y=8 before executing the blade reset.</i>	<ul style="list-style-type: none">Y=0 <ol style="list-style-type: none">XX ZZ XX: 01-50: Unit No. ZZ : 01-18: Slot No.10: DLC blade
CM10	Assign the station number connected to PGD(2)-U10 ADP to its associated Physical Port number.	<ul style="list-style-type: none">Y=00 <ol style="list-style-type: none">XX YY ZZ: Physical Port No. XX: 01-50: Unit No. YY: 01-18: Slot No. ZZ : 01-16: Circuit No.FX-FXXXXXXXXX: Station No.
CM13	For the station connected to PGD(2)-U10 ADP, set the Message Waiting/Stored Call Record lamps not to be lit. For the station connected to PGD(2)-U10 ADP, set the call history not to be stored when answering a station call. For the station connected to PGD(2)-U10 ADP, set the call history not to be stored when handling an unanswered station call.	<ul style="list-style-type: none">Y=03 <ol style="list-style-type: none">X-XXXXXXXXX: Station No.1: Not provided <ul style="list-style-type: none">Y=41 <ol style="list-style-type: none">X-XXXXXXXXX: Station No.1: Not stored <ul style="list-style-type: none">Y=49 <ol style="list-style-type: none">X-XXXXXXXXX: Station No.1: Not stored
A		

A	DESCRIPTION	DATA
CM13	For the station connected to PGD(2)-U10 ADP, set the call history not to be stored when answering a trunk call.	<ul style="list-style-type: none"> Y=60 (1) X-XXXXXXXX: Station No. (2) 1: Not stored
	For the station connected to PGD(2)-U10 ADP, set the call history not to be stored when handling an unanswered trunk call.	<ul style="list-style-type: none"> Y=61 (1) X-XXXXXXXX: Station No. (2) 1: Not stored
	Allow the accommodation of PGD(2)-U10 ADP.	<ul style="list-style-type: none"> Y=63 (1) X-XXXXXXXX: Station No. (2) 0 : To accommodate 1◀: Not accommodated
	BLADE RESET	
	NOTE 1: Set this data only for a Base Port of DLC blade.	
	NOTE 2: Whether the following equipment can be accommodated to the same DLC blade or not depends on this data.	
	<ul style="list-style-type: none"> - When the second data is set to "0" Accommodatable : DT300/DT400/D^{term}85/PGD(2)-U10 ADP Unaccommodatable: DESKCON/DSS Console - When the second data is set to "1" Accommodatable : DT300/DT400/D^{term}85/DESKCON/DSS Console Unaccommodatable: PGD(2)-U10 ADP 	
	NOTE 3: When the second data is set to 0, and accommodating DT300/DT400 Series DESI-less to the same DLC blade to which PGD(2)-U10 ADP is accommodated, the Line Key of the DT300/DT400 Series DESI-less does not light up (however, Character Display or Icon Display on the DESI-less screen is provided).	
CM12	Assign the kind of PGD(2)-U10 station (CH1).	<ul style="list-style-type: none"> Y=65 (1) X-XXXXXXXX: Station No. (2) 1: Paging
	NOTE: When this command is set, PGD(2)-U10 needs to reset (Blade Reset or pull out and reconnect the modular connector of the Multiline Terminal).	
B		

B	DESCRIPTION	DATA
CM12	Assign the kind of paging to the PGD(2)-U10 station (CH1).	<ul style="list-style-type: none"> Y=67 (1) X-XXXXXXXX: Station No. (2) 0 : Calling only (not using paging answer) 1 : Non-delay answer 2 : Non-delay and delay answer 3◀: Ordinary station
	Specify the Paging Zone to the PGD(2)-U10 station (CH1).	<ul style="list-style-type: none"> Y=68 (1) X-XXXXXXXX: Station No. (2) 00-09 : Paging Zone No. assigned by CM20 Y=0-3>A070-A079 NONE◀: No data
CM08	Specify whether the SST is sent to a paging station (PGD(2)-U10) when a speaker paging is seized.	<ul style="list-style-type: none"> (1) 732 (2) 0 : To send 1◀: Not sent
	Specify whether to provide the Paging Answer by PGD(2)-U10 Station Dialing (only in the case of Delay and Non-delay answer).	<ul style="list-style-type: none"> (1) 157 (2) 0 : To provide 1◀: Not provided
CM20	<p>NOTE: <i>The Paging Answer by the following methods is applied depending on the setting of this command.</i></p> <ul style="list-style-type: none"> - When the second data is set to "0": PGD(2)-U10 station number assigned by CM10 Y=00. - When the second data is set to "1": Paging Zone 0-9 assigned by CM20 Y=0-3: A070-A079. 	<ul style="list-style-type: none"> Y=0-3 Numbering Plan Group 0-3 (1) X-XXXX: Access Code (2) A070-A079: For Paging Answer (Zone 0-9)
C		

C	DESCRIPTION	DATA
CM44	Assign the paging function to the PGD(2)-U10 ADP.	<ul style="list-style-type: none"> Y=00 (1) XX Y XX: 00-31: Relay Group No. Y : 0-3: Circuit No. of PGD(2)-U10 ADP (2) 02XX: Speaker Paging Start XX : 00-09: Speaker Paging Zone 0-9
	Associate the PGD(2)-U10 station number with the Relay Group number.	<ul style="list-style-type: none"> Y=01 (1) 00-31: Relay Group No. (2) X-XXXXXXXX: PGD(2)-U10 Station No. NONE◀ : No data
CM12	Assign Service Restriction Class A for Paging Access to the required stations.	<ul style="list-style-type: none"> Y=02 (1) X-XXXXXXXX: Station No. (2) XX ZZ XX: 00-15◀: Service Restriction Class A
CM15	Allow Paging Access in Service Restriction Class A assigned by CM12 Y=02.	<ul style="list-style-type: none"> Y=08 (1) 00-15: Service Restriction Class A assigned by CM12 Y=02 (2) 1◀: Allow
CM41	Assign the forced release timer when the Paging Trunk is not released after seizing the trunk.	<ul style="list-style-type: none"> Y=0 (1) 120 (2) 00-99: 0-396 seconds (4 second increments) <p>If no data is set, the default setting is 180 seconds.</p>
END	<p>NOTE: <i>If the 2nd data is set to 00, forced release is not performed.</i></p>	

To use the dual port mode, do the following programming (the following programming is not required only when using the single port mode).

START	DESCRIPTION	DATA
<div>CM10</div>	<p>Assign the station number connected to PGD(2)-U10 ADP (CH2) to its associated Physical Port number.</p> <p>NOTE: <i>The setting of the Dual port mode is required when using 2 paging equipment on the PGD(2)-U10 ADP. For details, refer to “Setting Method of Port number/Station number in Dual port mode” in CM10 of the Command Manual.</i></p>	<ul style="list-style-type: none"> Y=00 <p>(1) XX YY ZZ: Physical Port No. XX: 01-50: Unit No. YY: 01-18: Slot No. ZZ : 17-32: Circuit No.</p> <p>(2) FX-FXXXXXXXXX: Station No.</p>
<div>CM13</div>	<p>For the station connected to PGD(2)-U10 ADP, set the Message Waiting/Stored Call Record lamps not to be lit.</p> <p>For the station connected to PGD(2)-U10 ADP, set the call history not to be stored when answering a station call.</p> <p>For the station connected to PGD(2)-U10 ADP, set the call history not to be stored when handling an unanswered station call.</p> <p>For the station connected to PGD(2)-U10 ADP, set the call history not to be stored when answering a trunk call.</p> <p>For the station connected to PGD(2)-U10 ADP, set the call history not to be stored when handling an unanswered trunk call.</p>	<ul style="list-style-type: none"> Y=03 <p>(1) X-XXXXXXXXX: Station No. (2) 1: Not provided</p> <ul style="list-style-type: none"> Y=41 <p>(1) X-XXXXXXXXX: Station No. (2) 1: Not stored</p> <ul style="list-style-type: none"> Y=49 <p>(1) X-XXXXXXXXX: Station No. (2) 1: Not stored</p> <ul style="list-style-type: none"> Y=60 <p>(1) X-XXXXXXXXX: Station No. (2) 1: Not stored</p> <ul style="list-style-type: none"> Y=61 <p>(1) X-XXXXXXXXX: Station No. (2) 1: Not stored</p>
<div>CM12</div>	<p>Assign the kind of PGD(2)-U10 station (CH2).</p> <p>NOTE: <i>When this command is set, PGD(2)-U10 needs to reset (Blade Reset or pull out and reconnect the modular connector of the Multiline Terminal).</i></p>	<ul style="list-style-type: none"> Y=65 <p>(1) X-XXXXXXXXX: Station No. (2) 1: Paging</p>
<div>A</div>		

A	DESCRIPTION	DATA
CM12	Assign the kind of paging to the PGD(2)-U10 station (CH2).	<ul style="list-style-type: none"> Y=67 (1) X-XXXXXXXX: Station No. (2) 0 : Calling only (not using paging answer) 1 : Non-delay answer 2 : Non-delay and delay answer 3◀: Ordinary station
	NOTE: This data is valid when 2nd data: 1 (Paging) is assigned in CM12 Y=65.	
	Specify the Paging Zone to the PGD(2)-U10 station (CH2).	<ul style="list-style-type: none"> Y=68 (1) X-XXXXXXXX: Station No. (2) 00-09 : Paging Zone No. assigned by CM20 Y=0-3>A070-A079 NONE◀: No data
	NOTE: This data is valid when 2nd data: 1 (Paging) is assigned in CM12 Y=65.	
CM20	Assign the access code for Paging Answer.	<ul style="list-style-type: none"> Y=0-3 Numbering Plan Group 0-3 (1) X-XXXX: Access Code (2) A070-A079: For Paging Answer (Zone 0-9)
CM44	Assign the paging function to the PGD(2)-U10 ADP.	<ul style="list-style-type: none"> Y=00 (1) XX Y XX: 00-31: Relay Group No. Y : 0-3: Circuit No. of PGD(2)-U10 ADP (2) 02XX: Speaker Paging Start XX : 00-09: Speaker Paging Zone 0-9
	Associate the PGD(2)-U10 station number with the Relay Group number.	<ul style="list-style-type: none"> Y=01 (1) 00-31: Relay Group No. (2) X-XXXXXXXX: PGD(2)-U10 Station No. NONE◀ : No data
CM13	Provide the connection with Dual port mode to the PGD(2)-U10 ADP (CH2).	<ul style="list-style-type: none"> Y=32 (1) X-XXXXXXXX: Station No. (2) 0 : To connect 1◀: Not connected
	BLADE RESET	
	Set the port mode of the PGD(2)-U10 ADP (CH2) to Dual port mode.	<ul style="list-style-type: none"> Y=33 (1) X-XXXXXXXX: Station No. (2) 0 : Dual port mode 1◀: Single port mode
	BLADE RESET	
B		

B	DESCRIPTION	DATA
CM13	Assign the station connected to Dual port mode of the PGD(2)-U10 ADP (CH2).	<ul style="list-style-type: none"> • Y=34 (1) X-XXXXXXXX: Station No. (2) 0 : Station connected to Dual port mode of the PGD(2)-U10 ADP 1◀: Station not connected to the PGD(2)-U10 ADP
<u>END</u>		

■ Setting Example

- Only when using the single port mode
- * PGD(2)-U10 station number (CH1) shall be “350”.

CM	Y No.	1 ST DATA	2ND DATA	REMARKS
05	0	0101	10	DLC blade accommodation setting.
10	00	010101	F350	Assign the PGD(2)-U10 station number to “350”.
13	03	350	1	Set the Message Waiting/Stored Call Record lamps not to be lit.
13	41	350	1	Set the call history not to be stored when answering a station call.
13	49	350	1	Set the call history not to be stored when handling an unanswered station call.
13	60	350	1	Set the call history not to be stored when answering a trunk call.
13	61	350	1	Set the call history not to be stored when handling an unanswered trunk call.
13	63	350	0	Allow the accommodation of PGD(2)-U10 ADP. NOTE: Set this data only for a Base Port of DLC blade.
12	65	350	1	Assign the kind of PGD(2)-U10 station to “Paging”.
12	68	350	00	Assign the Paging Zone No. to “00”.
44	00	000	0200	Assign the Speaker Paging Zone 0.
44	01	00	350	Assign the PGD(2)-U10 station number to Relay Group number.
08	-	732	0	Set the SST to paging trunk.
E0	3	0101	0101	DLC blade reset.

Continued on next page

CM	Y No.	1 ST DATA	2ND DATA	REMARKS
• When not using the Paging Answer				
12	67	350	0	Assign the kind of paging to “Calling only”.
20	0	3	803	Assign the Access Code for Paging.
• When using the Paging Answer				
12	67	350	1/2	Assign the kind of paging to “Non-delay answer” or “Non-delay and delay answer”.
08	-	157	0/1	Specify whether provide the Paging Answer by dialing PGD(2)-U10 station number.
20	0	3	803	Assign the Access Code for Paging. NOTE: <i>This Access Code is used for Paging/ Paging Answer when providing the Paging Answer with PGD(2)-U10 station number (CM08>157: 0).</i>
20	0	XX NOTE 2	A070	Assign the Access Code for Paging Answer (Paging Zone 0). NOTE 1: <i>Assign this data when not providing the Paging Answer with PGD(2)-U10 station number (CM08>157: 1).</i> NOTE 2: <i>Assign an arbitrary number for the first data.</i>

- When using the single port mode and dual port mode
* PGD(2)-U10 station number (CH1) shall be “350” (CH1) and “370” (CH2).

CM	Y No.	1 ST DATA	2ND DATA	REMARKS
Setting for “350” (CH1)				
05	0	0101	10	DLC blade accommodation setting.
10	00	010101	F350	Assign the PGD(2)-U10 station number (CH1) to “350”.
13	03	350	1	Set the Message Waiting/Stored Call Record lamps not to be lit.
13	41	350	1	Set the call history not to be stored when answering a station call.
13	49	350	1	Set the call history not to be stored when handling an unanswered station call.
13	60	350	1	Set the call history not to be stored when answering a trunk call.
13	61	350	1	Set the call history not to be stored when handling an unanswered trunk call.
13	63	350	0	Allow the accommodation of PGD(2)-U10 ADP. NOTE: <i>Set this data only for a Base Port of DLC blade.</i>
12	65	350	1	Assign the kind of PGD(2)-U10 station (CH1) to “Paging”.
12	68	350	00	Assign the Paging Zone No. to “00”.
44	00	000	0200	Assign the Speaker Paging Zone 0.
44	01	00	350	Assign the PGD(2)-U10 station number to Relay Group number.
08	-	732	0	Set the SST to paging trunk.
E0	3	0101	0101	DLC blade reset.

Continued on next page

CM	Y No.	1 ST DATA	2ND DATA	REMARKS
• When not using the Paging Answer				
12	67	350	0	Assign the kind of paging to “Calling only”.
20	0	3	803	Assign the Access Code for Paging.
• When using the Paging Answer				
12	67	350	1/2	Assign the kind of paging to “Non-delay answer” or “Non-delay and delay answer”.
08	-	157	0/1	Specify whether provide the Paging Answer by dialing PGD(2)-U10 station number.
20	0	3	803	Assign the Access Code for Paging. NOTE: <i>This Access Code is used for Paging/ Paging Answer when providing the Paging Answer with PGD(2)-U10 station number (CM08>157: 0).</i>
20	0	XX NOTE 2	A070	Assign the Access Code for Paging Answer (Paging Zone 0). NOTE 1: <i>Assign this data when not providing the Paging Answer with PGD(2)-U10 station number (CM08>157: 1).</i> NOTE 2: <i>Assign an arbitrary number for the first data.</i>

Continued on next page

CM	Y No.	1 ST DATA	2ND DATA	REMARKS
Setting for "370" (CH2)				
10	00	010101	F370	Assign the PGD(2)-U10 station number (CH2) to "370".
13	03	370	1	Set the Message Waiting/Stored Call Record lamps not to be lit.
13	41	370	1	Set the call history not to be stored when answering a station call.
13	49	370	1	Set the call history not to be stored when handling an unanswered station call.
13	60	370	1	Set the call history not to be stored when answering a trunk call.
13	61	370	1	Set the call history not to be stored when handling an unanswered trunk call.
12	65	370	1	Assign the kind of PGD(2)-U10 station (CH2) to "Paging".
12	68	370	01	Assign the Paging Zone No. to "01".
44	00	011	0201	Assign the Speaker Paging Zone 1.
44	01	01	370	Assign the PGD(2)-U10 station number to Relay Group number.
13	32	350	0	Provide the connection with dual port mode to the PGD(2)-U10 station number (CH1).
13	33	350	0	Assign the port mode of the PGD(2)-U10 station number (CH1) to dual port mode.
13	34	370	0	Set the PGD(2)-U10 station number (CH2) as the station connected to the PGD(2)-U10 ADP.
E0	3	0101	0101	DLC blade reset.
• When not using the Paging Answer				
12	67	370	0	Assign the kind of paging to "Calling only".
20	0	3	803	Assign the Access Code for Paging.

Continued on next page

CM	Y No.	1 ST DATA	2ND DATA	REMARKS
• When using the Paging Answer				
12	67	370	1/2	Assign the kind of paging to “Non-delay answer” or “Non-delay and delay answer”.
20	0	3	803	Assign the Access Code for Paging. NOTE: <i>This Access Code is used for Paging/ Paging Answer when providing the Paging Answer with PGD(2)-U10 station number (CM08>157: 0).</i>
20	0	XX NOTE 2	A071	Assign the Access Code for Paging Answer (Paging Zone 1). NOTE 1: <i>Assign this data when not providing the Paging Answer with PGD(2)-U10 station number (CM08>157: 1).</i> NOTE 2: <i>Assign an arbitrary number for the first data.</i>

Hardware Required

PGD(2)-U10 ADP/External Relay Interface on CPU

Paging equipment provided locally.

For cross connection of the Paging Equipment, refer to the System Hardware Manual.

Operating Procedure

To access paging equipment through CCIS:

1. Lift the handset and receive dial tone.
2. Dial the paging station number.
3. The connection to paging equipment is established.

RESTRICTION FROM OUTGOING CALLS-CCIS

General Description

This feature automatically restricts users of preselected stations from placing outgoing calls and/or certain miscellaneous trunk calls through CCIS, without Attendant assistance.

Programming

Refer to “DELUXE TRAVELING CLASS MARK-CCIS”. [📄 Page 1-147](#)

Operating Procedure

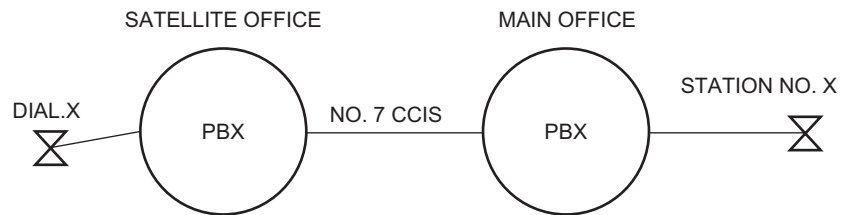
No manual operation is required.

SINGLE-DIGIT STATION CALLING-CCIS

General Description

This feature allows the assignment of Single-Digit Station numbers.

Programming



- For Satellite Office

START	DESCRIPTION	DATA
CM20	Assign the single-digit station number to LCR Group 3 (A129).	<ul style="list-style-type: none"> • Y=0-3 Number Plan Group 0-3 (1) X-XXXX: Access Code (2) A129: LCR Group 3
CM8A	Assign an area code table to be used to select a route pattern table.	<ul style="list-style-type: none"> • Y=A000 (1) 3: LCR Group 3 (2) 4005-4007: Area Code Development Pattern No. 5-7
	Assign the same digit which was assigned as the access code (in CM20) into the selected area code table.	<ul style="list-style-type: none"> • Y=4005-4007 (1) X-XXXX: Access Code (2) 0000-0255: Route Pattern No. 000-255
	Assign the next Route Pattern number to the Route Pattern number assigned CM8A Y=4005-4007.	<ul style="list-style-type: none"> • Y=0000-0255 Route Pattern No. 000-255 (1) 0: Designation of next table (2) 0000-0255: Next Route Pattern No. 000-255
	<p>NOTE: This data is required to expand the order of LCR selection that is assigned by CM8A Y=0000-0255. The order of LCR selection can be expanded to the maximum seventh.</p>	
	Assign the route pattern table with the desired properties and selection of appropriate routes.	<ul style="list-style-type: none"> • Y=0000-0255 (1) 1-4: Order of LCR Selection 1: 1st 2: 2nd 3: 3rd 4: 4th (2) XXX ZZ XXX: 000-255: LCR Pattern No. ZZ : 00-63: Trunk Route No.
END		

Operating Procedure

To place a Single-Digit Station Call:

1. Lift the handset and receive dial tone.
2. Dial the Single-Digit preprogrammed station number.
3. The called station will be rung.

STATION-TO-STATION CALLING-CCIS

General Description

This feature permits any station user to dial another station directly, through CCIS, without Attendant assistance.

Programming

In addition to the programming of flexible station numbering, perform the following programming:

START	DESCRIPTION	DATA
CM05	Assign a Unit number and Slot number to the LC/DLC blade.	<ul style="list-style-type: none"> Y=0 (1) XX ZZ XX: 01-50: Unit No. ZZ : 01-18: Slot No. (2) 10: DLC blade 20: LC blade
CM10	Assign a station number to each Physical Port number. NOTE: <i>To the following stations, 5 or more digits station number must not be assigned.</i> <ul style="list-style-type: none"> Stations observed by SMDR/ PMS/OAI Front Desk Terminal/Digital Multiline Terminal TIMS (CIS) 	<ul style="list-style-type: none"> Y=00 (1) XX YY ZZ: Physical Port No. XX: 01-50: Unit No. YY: 01-18: Slot No. ZZ : 01-32: Circuit No. (2) X-XXXXXXXX: Station No.
CM12	Assign the station type to each station.	<ul style="list-style-type: none"> Y=00 Telephone types (1) X-XXXXXXXX: Station No. (2) 1 : DP 2 : DTMF 3◀: DP/DTMF Y=03 Kind of Telephone (1) X-XXXXXXXX: Station No. (2) 15◀: Ordinary station
END		

Operating Procedure

To place a Station-to-Station call:

1. Lift the handset and receive dial tone.
2. Dial the desired station number.

TOLL RESTRICTION-3/6 DIGITS-CCIS

General Description

This feature allows the system to be programmed to restrict outgoing calls, through CCIS, according to specific Areas and/or Office codes. This restriction is determined on the basis of a three-digit Area Code or six-digit Area and Office Code numbering plan.

Programming

START	DESCRIPTION	DATA
CM08	Provide the system with the Toll Restriction feature for an outgoing call by System Speed Dialing/Station Speed Dialing, if desired.	(1) 035: Station Speed Dialing (2) 0 : Not provided 1◀: To provide
		(1) 044: System Speed Dialing (2) 0 : Not provided 1◀: To provide
	Provide the system with Toll Diversion or Toll Denial.	(1) 119 (2) 0 : Toll Diversion (Routed to “ICPT” key on DESKCON) 1◀: Toll Denial (Routed to Reorder Tone)
CM12	Assign a Trunk Restriction Class to each station.	<ul style="list-style-type: none">Y=01(1) X-XXXXXXXX: Station No.(2) X Z: Trunk Restriction Class<ul style="list-style-type: none">X: 1-8: In Day ModeZ: 1-8: In Night Mode<ul style="list-style-type: none">1: Unrestricted (RCA)2: Non-Restricted 1 (RCB)3: Non-Restricted 2 (RCC)4: Semi-Restricted 1 (RCD)5: Semi-Restricted 2 (RCE)6: Restricted 1 (RCF)7: Restricted 2 (RCG)8: Fully-Restricted (RCH)
A		

A

CM35

DESCRIPTION

DATA

Provide the Toll Restriction feature to the required trunk routes.

- Y=011
- (1) 00-63: Trunk Route No.
- (2) 0: To provide

Specify the route access capability for each restriction class.

- Y=051-058
- (1) 00-63: Trunk Route No.
- (2) 0 : Restricted
- 1 ◀: Allow

Assign the Area Code Development Pattern number for Toll Restriction Analysis and Maximum Digit Analysis to each trunk route.

- Y=076
- (1) 00-63: Trunk Route No.
- (2) 00-04: Area Code Development Pattern No. 0-4

CM81

Assign the Toll Restriction Patterns with five kinds of Trunk Restriction Classes assigned by CM35 Y=097. Toll Restriction Pattern 00-15 have already been programmed as shown below. If a new Restriction Pattern is required, change the data for Restriction Patterns 01-13 (00, 14 and 15 are fixed).

- Y=01-13
- Toll Restriction Pattern No. 01-13
- (1) 1-8: Trunk Restriction Class
- (2) 0: Restricted
- 3: Allowed

TRUNK RESTRICTION CLASS		Y															
		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	00
		TOLL RESTRICTION PATTERN NUMBER ON EACH TRUNK RESTRICTION CLASS															
		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	00
1	RCA	3	0	3	3	3	0	0	0	3	3	3	3	3	0	3	0
2	RCB	3	0	3	3	0	0	0	0	3	3	0	0	0	0	3	0
3	RCC	3	0	3	0	0	0	0	0	3	0	0	0	0	0	3	0
4	RCD	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
5	RCE	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
6	RCF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
7	RCG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
8	RCH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0

0: Restricted
3: Allowed

B

B

CM85

DESCRIPTION

DATA

Specify the maximum number of sending digits dialed by the calling party. The maximum number of sending digits including the area codes should be assigned to each area code.

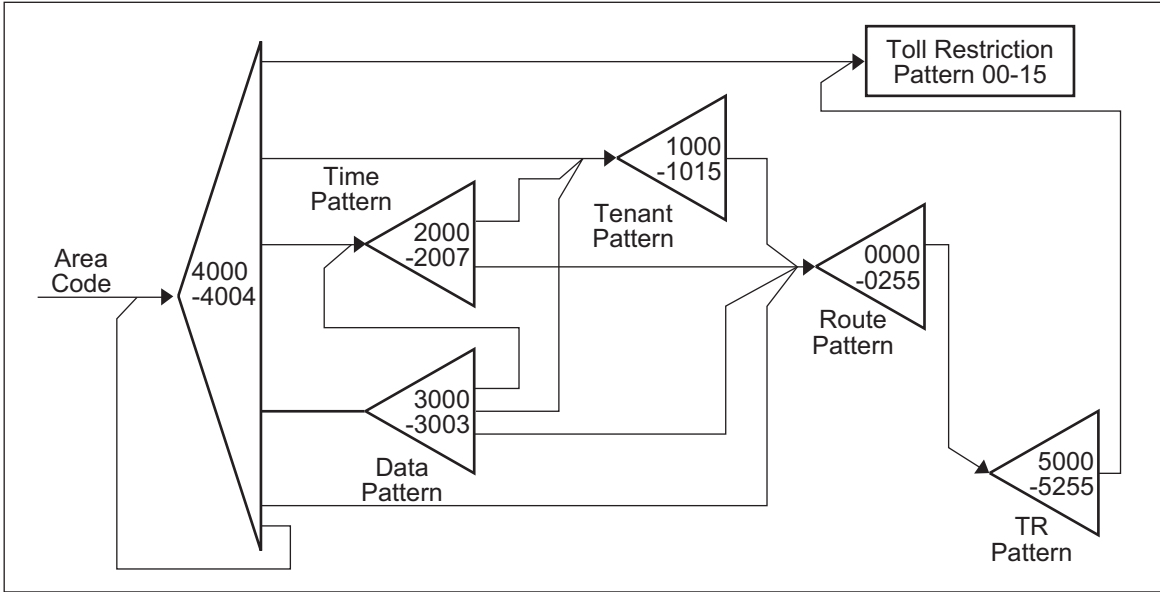
- Y=0-4
Area Code Development Pattern No. 0-4 assigned by CM8A Y=A000
- (1) X-X...X: Area Code dialed
(Maximum 8 digits)
- (2) 01-24◀: 1-24 digits
25-79 : 25-79 digits

CM8A

Assign the area code to be restricted and the Toll Restriction Pattern number assigned by CM81 to the Area Code Development Pattern number assigned by CM35 Y=076. For example, to provide the Trunk Restriction Class RCB, RCC, RCD, RCE, RCF, RCG and RCH with the Toll Restriction for Area Code "00":

- Area Code=00
- Toll Restriction Pattern=05
(See Toll Restriction Pattern Table on CM81.)

If the Toll Restriction Pattern for the same area code is changed according to the Tenant, Date, and Time, add the required patterns (Tenant, Date, and Time) to the area code.



C

C	DESCRIPTION	DATA
CM8A	To add the Tenant Pattern:	
	STEP 1 Assign the area code to be restricted and a Tenant Pattern number to the Area Code Development Pattern number assigned by CM35 Y=076.	<ul style="list-style-type: none"> Y=4000-4004 Area Code Development Pattern No. 0-4 (1) X-X...X: Area Code (Maximum 8 digits) (2) 1000-1015: Tenant Pattern No. 00-15
	STEP 2 Assign a Tenant number and a Route Pattern number to the Tenant Pattern number assigned by Step 1.	<ul style="list-style-type: none"> Y=1000-1015 Tenant Pattern No. 00-15 (1) 00-63: Tenant No. 00-63 (2) 0000-0255: Route Pattern No. 000-255
	STEP 3 Assign a TR Pattern number to the Route Pattern number assigned by Step 2.	<ul style="list-style-type: none"> Y=0000-0255 Route Pattern No. 000-255 (1) 1 (2) XXX 00 XXX: 000-255: TR Pattern No.
	STEP 4 Assign a Toll Restriction Pattern number (assigned by CM81) to the TR Pattern number assigned by Step 3.	<ul style="list-style-type: none"> Y=5000-5255 TR Pattern No. 000-255 (1) 000 (2) 00-15◀: Toll Restriction Pattern No. 00-15
	To add the Time and Data Pattern:	
	STEP 1 Assign an area code to be restricted and a Date Pattern number to the Area Code Development Pattern number assigned by CM35 Y=076.	<ul style="list-style-type: none"> Y=4000-4004 Area Code Development No. 0-4 (1) X-X...X: Area Code (Maximum 8 digits) (2) 3000-3003: Date Pattern No. 0-3
	STEP 2 Assign a data to apply Toll Restriction and a Time Pattern number 0-7 to the Date Pattern number assigned by Step 1.	<ul style="list-style-type: none"> Y=3000-3003 Date Pattern No. 0-3 (1) 0-6 (Date) 0: Sunday 1: Monday 2: Tuesday 3: Wednesday 4: Thursday 5: Friday 6: Saturday (2) 2000-2007: Time Pattern No. 0-7
D	Set the data for all dates, one by one to apply Toll Restriction.	

<div>D</div> <div>CM8A</div>	DESCRIPTION	DATA
	STEP 3 Assign the starting time for the Toll Restriction and Route Pattern number to the Time Pattern number assigned by Step 2. Set the Starting Time as shown below.	<ul style="list-style-type: none">Y=2000-2007 Time Pattern No. 0-7 (1) XX ZZ (Starting Time) XX: 00-23 (Hours) ZZ : 00/30 (Minutes) (2) 0000-0255: Route Pattern No. 000-255 If Tenant Pattern is required, set 1000-1015 (Tenant Pattern No. 0-15).
	Example: To set the 7:00 AM to 9:00 PM for the Toll Restriction, enter the following starting times one by one. 0700 (7:00 AM-7:30 AM) 0730 (7:30 AM-8:00 AM) 0800 (8:00 AM-8:30 AM) : 2030 (8:30 PM-9:00 PM)	
	STEP 4 Assign a TR Pattern number to the Route Pattern number assigned by Step 3.	<ul style="list-style-type: none">Y=0000-0255 Route Pattern No. 000-255 (1) 1 (2) XXX 00 XXX: 000-255: TR Pattern No.
	STEP 5 Assign a Toll Restriction Pattern number assigned by CM81 to the TR Pattern number assigned by Step 4.	<ul style="list-style-type: none">Y=5000-5255 TR Pattern No. 000-255 (1) 000 (2) 00-15◀: Toll Restriction Pattern No. 00-15
END		

Operating Procedure

No manual operation is required.

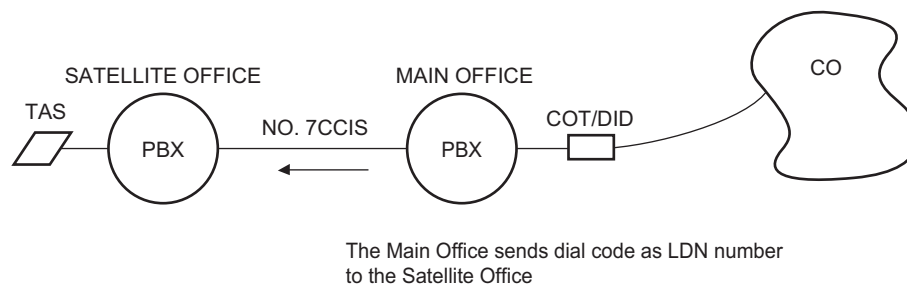
TRUNK ANSWER FROM ANY STATION-CCIS

General Description

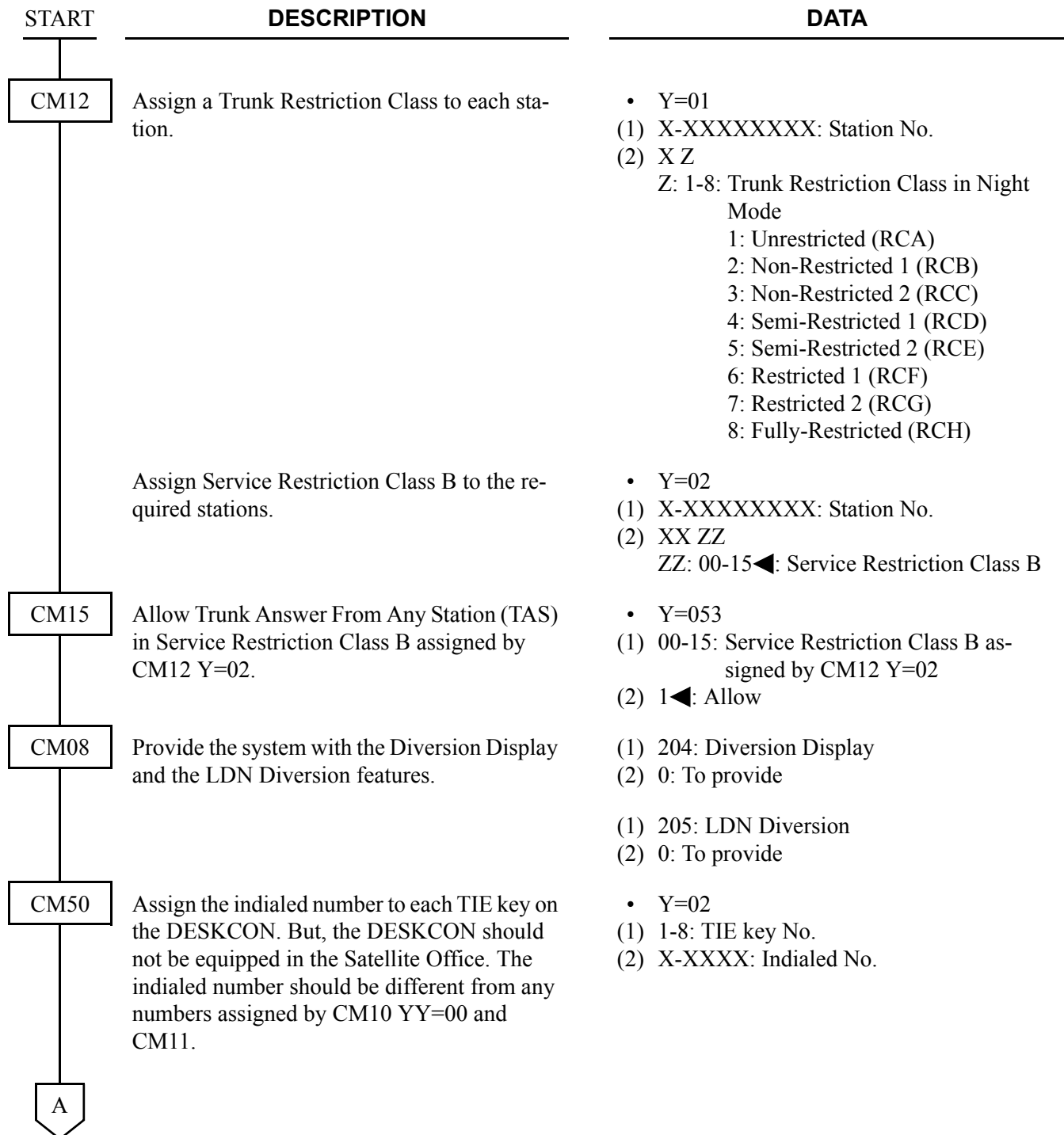
This feature allows any station, not restricted from incoming calls, to answer incoming calls when the network is in Night mode.

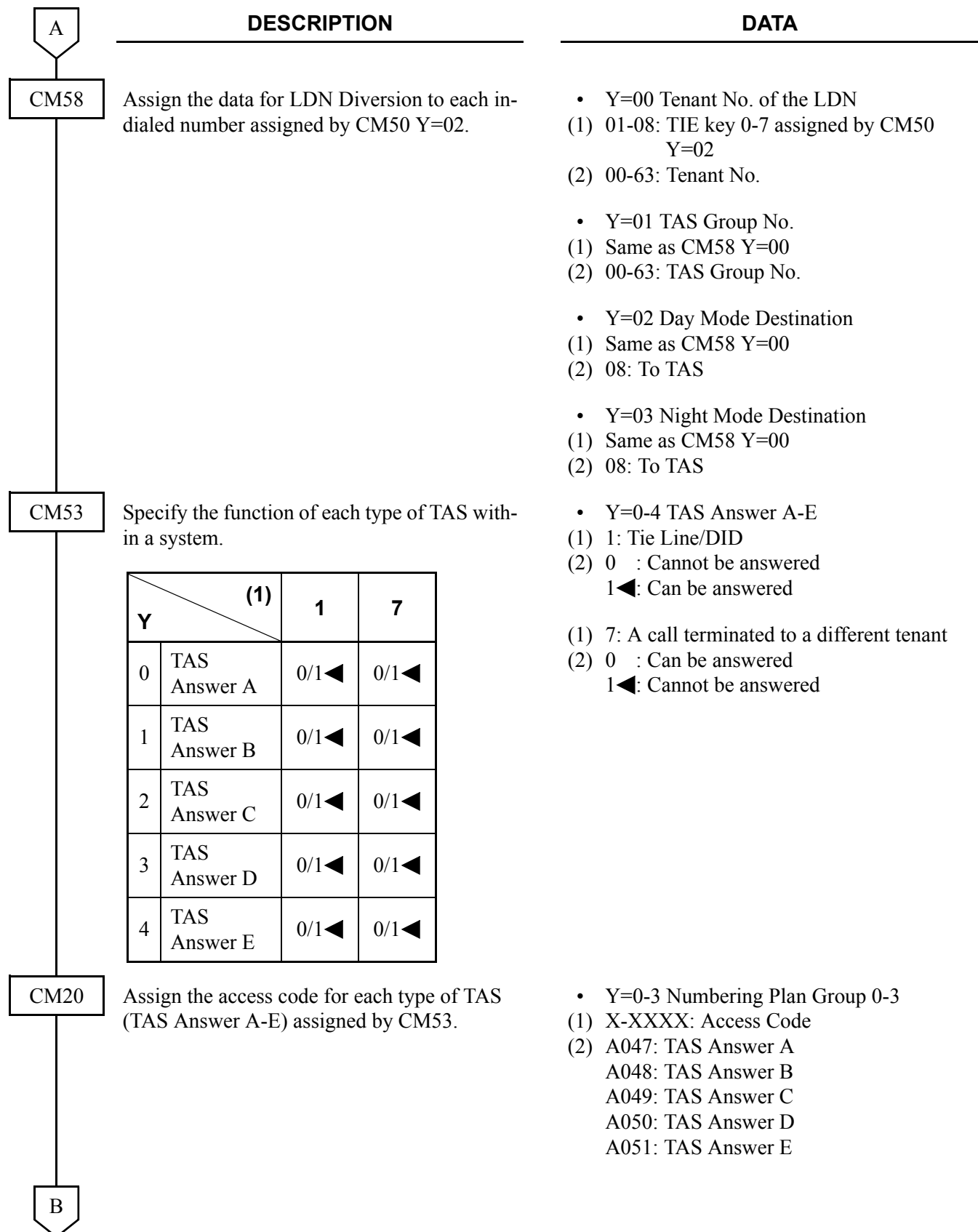
When this feature is activated, incoming exchange network calls will activate a common alert Trunk Answer from Any Station (TAS) signal at the customer premises. By dialing a specified code, any station may answer the call and extend it to any other station, through the CCIS network, using Call Transfer-All Calls-CCIS.

Programming



- For the Satellite Office
Use the LDN Diversion feature.



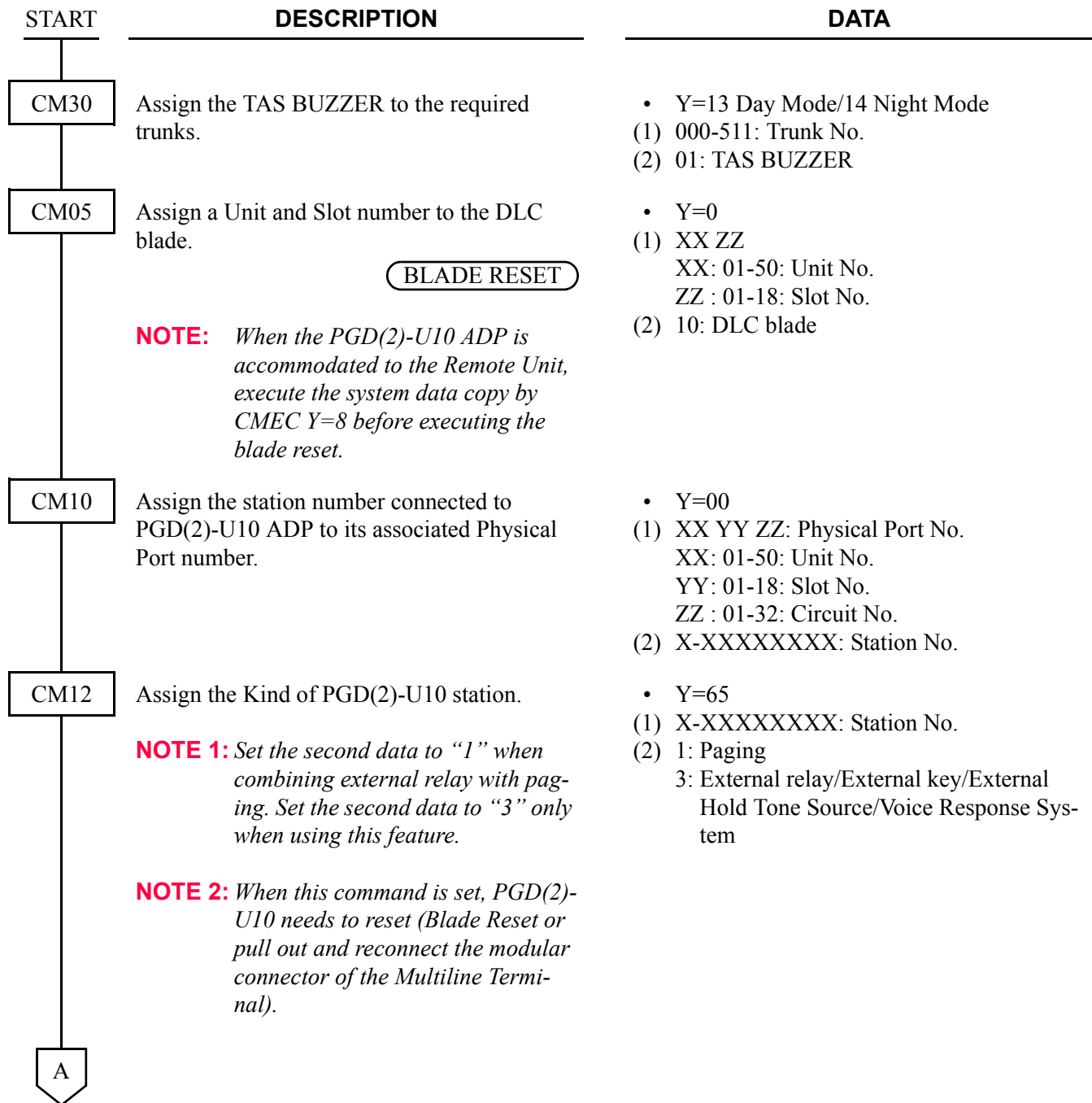


B	DESCRIPTION	DATA
CM63	Specify the tenants allowing TAS Answer between them.	<ul style="list-style-type: none">• Y=0(1) XX ZZ XX: 00-63: Tenant No. of TAS Answer station ZZ : 00-63: Tenant No. of Trunk(2) 0 : Allow 1◀: Restricted
<u>END</u>		

To provide an External TAS Indicator (To use the External Relay Interface on CPU):

START	DESCRIPTION	DATA
CM30	Assign the TAS BUZZER to the required trunks.	<ul style="list-style-type: none"> Y=13 Day Mode/14 Night Mode (1) 000-511: Trunk No. (2) 01: TAS BUZZER
CM44	Assign the TAS Group number assigned by CM30 Y=17 to a circuit number of the External Relay Interface on CPU.	<ul style="list-style-type: none"> Y=00 (1) 312, 313: External Relay Interface on CPU (2) 13 XX XX: 00-63: TAS Group No. assigned by CM30 Y=17
CM59	Specify the indication pattern for the External TAS Indicator.	(1) 00 (2) 01 : 30 IPM 02 : 60 IPM 03 : 120 IPM 07 : Steady on NONE ◀: 120 IPM (0.25 seconds ON/OFF)
END		

To provide an External TAS Indicator (To use the PGD(2)-U10 ADP):



A

CM13

DESCRIPTION

DATA

For the station connected to PGD(2)-U10 ADP, set the Message Waiting/Stored Call Record lamps not to be lit.

- Y=03
- (1) X-XXXXXXXX: Station No.
- (2) 1: Not provided

For the station connected to PGD(2)-U10 ADP, set the call history not to be stored when answering a station call.

- Y=41
- (1) X-XXXXXXXX: Station No.
- (2) 1: Not stored

For the station connected to PGD(2)-U10 ADP, set the call history not to be stored when handling an unanswered station call.

- Y=49
- (1) X-XXXXXXXX: Station No.
- (2) 1: Not stored

For the station connected to PGD(2)-U10 ADP, set the call history not to be stored when answering a trunk call.

- Y=60
- (1) X-XXXXXXXX: Station No.
- (2) 1: Not stored

For the station connected to PGD(2)-U10 ADP, set the call history not to be stored when handling an unanswered trunk call.

- Y=61
- (1) X-XXXXXXXX: Station No.
- (2) 1: Not stored

Allow the accommodation of PGD(2)-U10 ADP.

- Y=63
- (1) X-XXXXXXXX: Station No.
- (2) 0 : To accommodate
- 1 : Not accommodated

BLADE RESET

NOTE 1: Set this data only for a Base Port of DLC blade.

NOTE 2: Whether the following equipment can be accommodated to the same DLC blade or not depends on this data.

- When the second data is set to "0"

Accommodatable : DT300/DT400/D^{term}85/PGD(2)-U10 ADP

Unaccommodatable: DESKCON/DSS Console

- When the second data is set to "1"

Accommodatable : DT300/DT400/D^{term}85/DESKCON/DSS Console

Unaccommodatable: PGD(2)-U10 ADP

NOTE 3: When the second data is set to 0, and accommodating DT300/DT400 Series DESI-less to the same DLC blade to which PGD(2)-U10 ADP is accommodated, the Line Key of the DT300/DT400 Series DESI-less does not light up (however, Character Display or Icon Display on the DESI-less screen is provided).

B

B	DESCRIPTION	DATA
CM44	Assign the TAS Group number assigned by CM30 Y=17 to a circuit number on the PGD(2)-U10 ADP.	<ul style="list-style-type: none"> Y=00 (1) XX Y: Circuit No. XX: 00-31: Relay Group No. Y : 0-3: Circuit No. (2) 13 XX XX: 00-63: TAS Group No. assigned by CM30 Y=17
	Associate the PGD(2)-U10 station number with the Relay Group number.	<ul style="list-style-type: none"> Y=01 (1) 00-31: Relay Group No. (2) X-XXXXXXXX: PGD(2)-U10 Station No. NONE◀: No data
CM59	Specify the indication pattern for the External TAS Indicator.	<ul style="list-style-type: none"> (1) 00 (2) 01 : 30 IPM 02 : 60 IPM 03 : 120 IPM 07 : Steady on NONE◀: 120 IPM (0.25 seconds ON/OFF)
<u>END</u>		

- For Main Office

COT: When using a COT interface between the Central Office and a Main Office, set up programming to the Main Office by using the DIT-CCIS feature, and send the dial code as an LDN to the Satellite Office. Refer to programming of DIT-CCIS in this chapter for details.

DID: When using a DID interface between the Central Office and the Main Office, there are two programming patterns:

Pattern 1 When an incoming LDN call is diverted to a Satellite Office in both Day Mode and Night Mode, program by using the LCR and uniform numbering features. Refer to Numbering Plan Assignment.

Pattern 2 When an incoming LDN call is diverted to a Satellite Office in either Day Mode or Night Mode (not both), the following programming for the LDN Diversion-Outside feature is required.

START	DESCRIPTION	DATA
CM08	Provide the system with the Diversion Display and the LDN Diversion features.	(1) 204: Diversion Display (2) 0: To provide (1) 205: LDN Diversion (2) 0: To provide
CM50	Assign the indialed number to each TIE key on the DESKCON. The indialed number should be different from any numbers assigned by CM10 YY=00 and CM11.	• Y=01 (1) 1-8: LDN key No. (2) X-XXXX: Indialed No.
CM58	Assign the data for LDN Diversion to each indialed number assigned by CM50 Y=01.	• Y=00 Tenant No. (1) 01-08: LDN key 0-7 assigned by CM50 Y=01 (2) 00-63: TAS Group • Y=02 Day Mode Destination (1) 01-08: LDN key 0-7 assigned by CM50 Y=01 (2) 09: LDN Diversion-Outside (Assigned by CM58 Y=08)
A		

A	DESCRIPTION	DATA
CM58	Assign the Abbreviated Code for System Speed Dialing to terminate the Satellite Office via CCIS by DID in Day Mode and Night Mode, respectively.	<ul style="list-style-type: none"> Y=03 Night Mode Destination (1) Same as CM58 Y=02 (2) 09: LDN Diversion-Outside (Assigned by CM58 Y=09) <ul style="list-style-type: none"> Y=08 Day Mode Y=09 Night Mode (1) Same as CM58 Y=02 (2) CXX XX: 00-31: Abbreviated Code for System Speed Dialing Assigned by CM71>66
CM71	Assign the System Speed Dialing memory area exclusively for LDN Diversion-Outside.	(1) 66: Exclusive for LDN Diversion-Outside (2) XXX YYY XXX: 000-299: Starting Memory Slot No. in Block YYY: 001-300: Number of Slots to be assigned in Block NONE◀: No data
CM72	Set the stored number into the Memory Slot number allocated by CM71.	<ul style="list-style-type: none"> 000-299: Memory Slot No. (1) XXXX <input type="text"/> YY...Y (2) XXXX: Access Code (Maximum 4 digits) <input type="text"/> : Separator Mark YY...Y: Called Party No. (Maximum 26 digits)
CM36	Specify the combination of Trunk Routes allowing a tandem connection.	<ul style="list-style-type: none"> Y=0 (1) XX ZZ XX: 00-63: Incoming Trunk Route ZZ : 00-63: Outgoing Trunk Route (2) 0: Allow
<u>END</u>		

Hardware Required

To provide the External TAS Indicator:

- PGD(2)-U10 ADP/External Relay Interface on CPU
 - Indicator
- Requirement to External Indicator
Control Method: Loop/Ground/Battery (-27 V) (Maximum 125 mA)
Type : Visual and/or Audible type with volume control

For cross connection of the TAS indicator, refer to the System Hardware Manual.

To provide the telephone set for TAS Indication:

- GCD-4LCF/GCD-8LCF blade (Two telephone sets per blade can be equipped.)
- Conventional telephone sets

Operating Procedure

To answer an incoming call in Night mode:

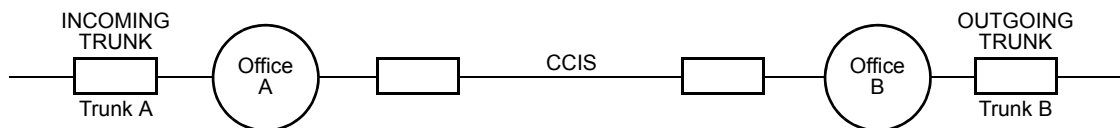
1. The TAS signal (bell, buzzer, etc.) sounds indicate an incoming call.
2. Lift the handset and receive dial tone.
3. Dial the TAS access code.
4. Connect to the incoming call.

TRUNK-TO-TRUNK RESTRICTION-CCIS

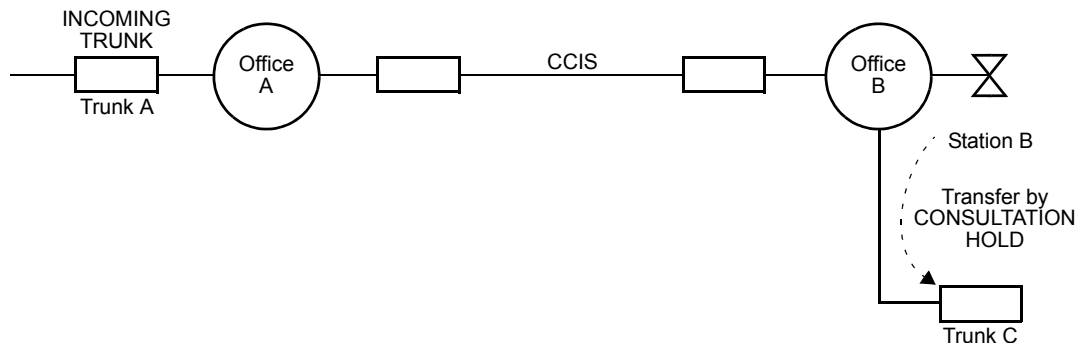
General Description

This feature allows Trunk-to-Trunk tandem restriction by caller's information sent from each office (e.g., caller is a trunk) through the CCIS network.

Case 1: A tandem connection at the following office can be restricted by Trunk Restriction Class of Trunk A and Outgoing Connection Restriction data of Trunk B.



Case 2: When Station B transfers an Incoming Call through CCIS to Trunk C, a Trunk-to-Trunk connection can be restricted by Trunk Restriction Class of Trunk A and Outgoing Connection Restriction data of Trunk C.



Programming

START	DESCRIPTION	DATA
CM35	Assign the Trunk Restriction Class to the required trunk route.	<ul style="list-style-type: none">Y=097(1) 00-63: Route No.(2) X Z<ul style="list-style-type: none">X: 1-8: Day ClassZ: 1-8: Night Class<ul style="list-style-type: none">1: Unrestricted (RCA)2: Non-Restricted 1 (RCB)3: Non-Restricted 2 (RCC)4: Semi-Restricted 1 (RCE)5: Semi-Restricted 2 (RCE)6: Restricted 1 (RCF)7: Restricted 2 (RCG)8: Fully-Restricted (RCH)
	Assign the Area Code Development Pattern number to the required trunk route.	<ul style="list-style-type: none">Y=076(1) 00-63: Trunk Route No.(2) 00-07: Area Code Development Pattern No. 0-7
A		

A

CM81

DESCRIPTION

Assign the Toll Restriction Patterns with eight kinds of Trunk Restriction Classes assigned by CM35 Y=097. Toll Restriction Pattern 00-15 have already been programmed as shown below. If a new Restriction Pattern is required, change the data for Restriction Patterns 01-13 (00, 14 and 15 are fixed).

DATA

- Y=01-13
Toll Restriction Pattern No. 01-13
- (1) 1-8: Trunk Restriction Class
- (2) 0: Restricted
3: Allowed

TRUNK RESTRICTION CLASS		Y															
		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	00
		TOLL RESTRICTION PATTERN NUMBER ON EACH TRUNK RESTRICTION CLASS															
		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	00
1	RCA	3	0	3	3	3	0	0	0	3	3	3	3	3	0	3	0
2	RCB	3	0	3	3	0	0	0	0	3	3	0	0	0	0	3	0
3	RCC	3	0	3	0	0	0	0	0	3	0	0	0	0	0	3	0
4	RCD	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
5	RCE	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
6	RCF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
7	RCG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
8	RCH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0

0: Restricted
3: Allowed

CM85

Specify the maximum number of sending digits dialed by the calling party. The maximum number of sending digits including the area codes should be assigned to each area code.

- Y=0-7
Area Code Development Pattern No. 0-7 assigned by CM8A Y=A000
- (1) X-X...X: Area Code dialed
(Maximum 8 digits)
- (2) 01-24 : 1-24 digits
25-79 : 25-79 digits

B

B

CM8A

DESCRIPTION

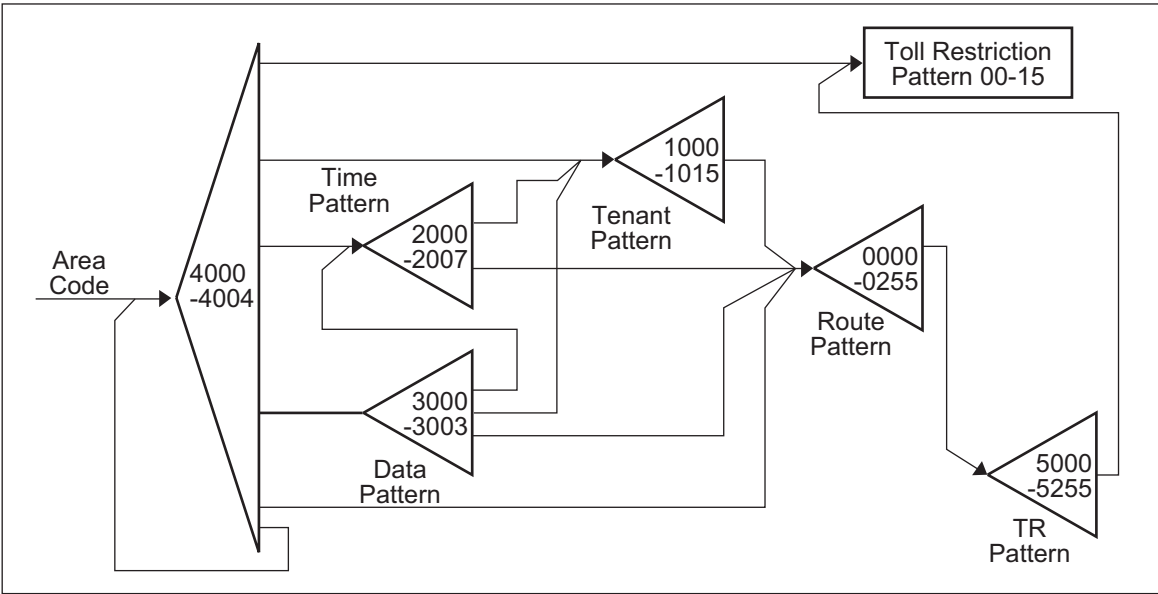
DATA

Assign the area code to be restricted and the Toll Restriction Pattern number assigned by CM81 to the Area Code Development Pattern number assigned by CM35 Y=076. For example, to provide the Trunk Restriction Class RCB, RCC, RCD, RCE, RCF, RCG and RCH with the Toll Restriction for Area Code "00":

- Y=4000-4004
Area Code Development No. 0-4
- (1) X-X...X: Area Code (Maximum 8 digits)
- (2) B000-B015: Toll Restriction Pattern 00-15

- Area Code=00
- Toll Restriction Pattern=05
(See Toll Restriction Pattern Table on CM81.)

If the Toll Restriction Pattern for the same area code is changed according to the Tenant, Date, and Time, add the required patterns (Tenant, Date, and Time) to the area code.



C

C	DESCRIPTION	DATA
CM8A	To add the Tenant Pattern:	
	STEP 1 Assign the area code to be restricted and the Tenant Pattern number to the Area Code Development Pattern number assigned by CM35 Y=076.	<ul style="list-style-type: none"> Y=4000-4004 Area Code Development Pattern No. (1) X-X...X: Area Code (Maximum 8 digits) (2) 1000-1015: Tenant Pattern No. 00-15
	STEP 2 Assign the Tenant number and the Route Pattern number to Tenant Pattern number assigned by Step 1.	<ul style="list-style-type: none"> Y=1000-1015 Tenant Pattern No. 00-15 (1) 00-63: Tenant No. 00-63 (2) 0000-0255: Route Pattern No. 000-255
	STEP 3 Assign the TR Pattern number to Route Pattern number assigned by Step 2.	<ul style="list-style-type: none"> Y=0000-0255 Route Pattern No. 000-255 (1) 1 (2) XXX 00 XXX: 000-255: TR Pattern No. 000-255
	STEP 4 Assign the Toll Restriction Pattern number assigned by CM81 to TR Pattern number assigned by Step 3.	<ul style="list-style-type: none"> Y=5000-5255 TR Pattern No. 000-255 (1) 000 (2) 00-15◀: Toll Restriction Pattern No. 00-15
	To add the Time and Date Pattern:	
	STEP 1 Assign the area code to be restricted and the Date Pattern number to the Area Code Development Pattern number assigned by CM35 Y=076.	<ul style="list-style-type: none"> Y=4000-4004 Area Code Development No. 0-4 (1) X-X...X: Area Code (Maximum 8 digits) (2) 3000-3003: Date Pattern No. 0-3
	STEP 2 Assign a date to be applied to Toll Restriction and Time Pattern number 0-7 to the Date Pattern number assigned by Step 1.	<ul style="list-style-type: none"> Y=3000-3003 Date Pattern No. 0-3 (1) 0-6 (Date) 0: Sunday 1: Monday 2: Tuesday 3: Wednesday 4: Thursday 5: Friday 6: Saturday (2) 2000-2007: Time Pattern No. 0-7
D	Set the data for all dates, one by one, to be applied Toll Restriction.	

D

CM8A

END

DESCRIPTION

DATA

STEP 3 Assign the starting time for the Toll Restriction and Route Pattern number to the Time Pattern number assigned by Step 2. Set the Starting Time as shown below.

Example: To Set the 7:00 AM to 9:00 PM for the Toll Restriction, enter the following starting times one by one.

0700 (7:00 AM-7:30 AM)
0730 (7:30 AM-8:00 AM)
0800 (8:00 AM-8:30 AM)
⋮
2030 (8:30 PM-9:00 PM)

STEP 4 Assign the TR Pattern number to the Route Pattern number assigned by Step 3.

STEP 5 Assign the Toll Restriction pattern number (assigned by CM81) to TR Pattern number assigned by Step 4.

- Y=2000-2007 Time Pattern No. 00-07
- (1) XX ZZ (Starting Time)
XX: 00-23 (Hours)
ZZ : 00/30 (Minutes)
- (2) 0000-0255 (Route Pattern No. 000-255)
If Tenant Pattern is required, set 1000-1015 (Tenant Pattern No. 00-15).
-
- Y=0000-0255
Route Pattern No.000-255
- (1) 1
(2) XXX 00
XXX: 000-255: TR Pattern No.
-
- Y=5000-5255 TR Pattern No. 000-255
- (1) 000
(2) 00-15◀: Toll Restriction Pattern No. 00-15

When changing the default setting (See **NOTE** on next page.), or when receiving the 2400 IPX Trunk Restriction Class (0-15), execute the following programming.

START	DESCRIPTION	DATA
CM42	Assign the 2400 IPX Trunk Restriction Class to each SV9300 Trunk Restriction Class for the restriction class conversion from the SV9300 to 2400 IPX, if required.	(1) 20: SV9300 TRK Restriction Class 1 (RCA) 21: SV9300 TRK Restriction Class 2 (RCB) 22: SV9300 TRK Restriction Class 3 (RCC) 23: SV9300 TRK Restriction Class 4 (RCD) 24: SV9300 TRK Restriction Class 5 (RCE) 25: SV9300 TRK Restriction Class 6 (RCF) 26: SV9300 TRK Restriction Class 7 (RCG) 27: SV9300 TRK Restriction Class 8 (RCH) (2) 00-15: 2400 IPX TRK Restriction Class (0-15)
	Assign the SV9300 Trunk Restriction Class to each 2400 IPX Trunk Restriction Class for the restriction class conversion from 2400 IPX to SV9300, if required.	(1) 30: 2400 IPX TRK Restriction Class 0 31: 2400 IPX TRK Restriction Class 1 32: 2400 IPX TRK Restriction Class 2 33: 2400 IPX TRK Restriction Class 3 34: 2400 IPX TRK Restriction Class 4 35: 2400 IPX TRK Restriction Class 5 36: 2400 IPX TRK Restriction Class 6 37: 2400 IPX TRK Restriction Class 7 38: 2400 IPX TRK Restriction Class 8 39: 2400 IPX TRK Restriction Class 9 40: 2400 IPX TRK Restriction Class 10 41: 2400 IPX TRK Restriction Class 11 42: 2400 IPX TRK Restriction Class 12 43: 2400 IPX TRK Restriction Class 13 44: 2400 IPX TRK Restriction Class 14 45: 2400 IPX TRK Restriction Class 15 (2) 01-08: SV9300 TRK Restriction Class (1-8)
END		

NOTE: *If no data is set, the following default setting is provided.*

(1) SV9300 to 2400 IPX

1ST DATA	2ND DATA
20: SV9300 TRK Restriction Class 1 (RCA)	01: 2400 IPX TRK Restriction Class 1
21: SV9300 TRK Restriction Class 2 (RCB)	02: 2400 IPX TRK Restriction Class 2
22: SV9300 TRK Restriction Class 3 (RCC)	03: 2400 IPX TRK Restriction Class 3
23: SV9300 TRK Restriction Class 4 (RCD)	04: 2400 IPX TRK Restriction Class 4
24: SV9300 TRK Restriction Class 5 (RCE)	05: 2400 IPX TRK Restriction Class 5
25: SV9300 TRK Restriction Class 6 (RCF)	06: 2400 IPX TRK Restriction Class 6
26: SV9300 TRK Restriction Class 7 (RCG)	07: 2400 IPX TRK Restriction Class 7
27: SV9300 TRK Restriction Class 8 (RCH)	08: 2400 IPX TRK Restriction Class 8

(2) 2400 IPX to SV9300

1ST DATA	2ND DATA
30 : 2400 IPX TRK Restriction Class 0	01: SV9300 TRK Restriction Class 1 (RCA)
31 : 2400 IPX TRK Restriction Class 1	01: SV9300 TRK Restriction Class 1 (RCA)
32 : 2400 IPX TRK Restriction Class 2	02: SV9300 TRK Restriction Class 2 (RCB)
33 : 2400 IPX TRK Restriction Class 3	03: SV9300 TRK Restriction Class 3 (RCC)
34 : 2400 IPX TRK Restriction Class 4	04: SV9300 TRK Restriction Class 4 (RCD)
35 : 2400 IPX TRK Restriction Class 5	05: SV9300 TRK Restriction Class 5 (RCE)
36 : 2400 IPX TRK Restriction Class 6	06: SV9300 TRK Restriction Class 6 (RCF)
37 : 2400 IPX TRK Restriction Class 7	07: SV9300 TRK Restriction Class 7 (RCG)
38-45: 2400 IPX TRK Restriction Class 8-15	08: SV9300 TRK Restriction Class 8 (RCH)

Operating Procedure

No manual operation is required.

UNIFORM NUMBERING PLAN-CCIS

General Description

In a CCIS network, a Uniform Numbering Plan enables a station user to call any other station in the network. Two alternative numbering plans are provided. In the first plan, the station user dials any digits station number from three to eight. The location of the office is identified by the first one-, two-, or three-digit of the station number. In the second plan, the station user dials a one-, two-, or three-digit office code and any digit station number from two to eight.

Programming

In addition to the programming of Numbering Plan Assignment, to assign the Own Office number (for 5 digits), do the following programming.

START	DESCRIPTION	DATA
<div>CMA7</div>	<p>Assign the Own Office number (for 5 digits).</p> <p>NOTE: Do not assign CMA7 Y=06 and CMA7 Y=82 simultaneously. The setting of CMA7 Y=82 has a priority if these two commands are assigned simultaneously.</p>	<ul style="list-style-type: none">Y=82(1) XX: CCH No.(2) 00000-99999: Office No.NONE◀ : No data
<div>END</div>		

Operating Procedure

To call a station located in another office by using Numbering Plan 1:

1. Lift the handset and receive dial tone.
2. Dial any digit station number from three to eight digits.
3. The call is routed to another office according to programmed routing information, and the called station rings.
4. The called station answers and the parties are connected.

To call a station located in another office by using Numbering Plan 2:

1. Lift the handset and receive dial tone.
2. Dial the access code for CCIS.
3. Dial the one-, two- or three-digit office code and any digit station number from two to eight digits.
4. The call is routed to the office designated by the office code. The called station rings.
5. The called station answers and the parties are connected.

VOICE CALL-CCIS

General Description

This feature provides a voice path, through the CCIS network, between a Multiline Terminal in one office and a Multiline Terminal in another office. This path is established from the calling party to the called party's built-in speaker. If the called party's **MIC** lamp is on, the called party can have a conversation in hands-free.

Programming

START	DESCRIPTION	DATA
CM90	Assign a Voice Call key to the Multiline Terminal.	<ul style="list-style-type: none">Y=00(1) My Line No. + <input type="text"/> + Key No.(2) F1002: Voice Call
END		

Operating Procedure

From a Multiline Terminal to another Multiline Terminal:

1. The originating Multiline Terminal user dials the desired station number in another office, and receives ring back tone.
2. The calling party presses the Voice Call feature key.
A signal tone is transmitted over the CCIS network to the called party's speaker.
The calling party's LCD shows:

VOICE CALL XXXX
(TIME DISPLAY)

Called Multiline Terminal

3. The called party presses the **MIC** key (if the **MIC** lamp is not lit) to allow two-way conversation with the calling party.

VOICE MAIL INTEGRATION-CCIS

General Description

This feature allows any station user in the CCIS network to utilize the Voice Mail System (VMS) with the Message Center Interface (MCI).

Programming

Refer to Programming Manual.

Operating Procedure

To record a message into the VMS:

1. Lift the handset and receive dial tone.
2. Dial the voice mail station number and receive ringback tone.
3. Follow the instructions given by the VMS.

To retrieve a message from the VMS:

1. Lift the handset and receive dial tone.
2. Dial the voice mail station number and receive ringback tone.

The LCD shows:

[**xxx**]

VMS: Voice mail station number

3. Follow the instructions given by the VMS.

To set call forwarding to the VMS:

- Call Forwarding-All Calls
- Call Forwarding-Busy Line
- Call Forwarding-No Answer
- Split Call Forwarding-All Calls
- Split Call Forwarding-Busy Line
- Split Call Forwarding-No Answer

1. Lift the handset and receive dial tone.
2. Dial the Call Forwarding or Split Call Forwarding feature access code, and receive Special Dial Tone.
3. Dial the voice mail station number and receive Service Set Tone.

The LCD shows:

[SET xxxx]

VMS: Voice mail station number

To call a station number whose call forwarding is set to the VMS:

1. Lift the handset and receive dial tone.
2. Dial the desired station number and receive ringback tone.

The LCD shows:

[FDA xxx]

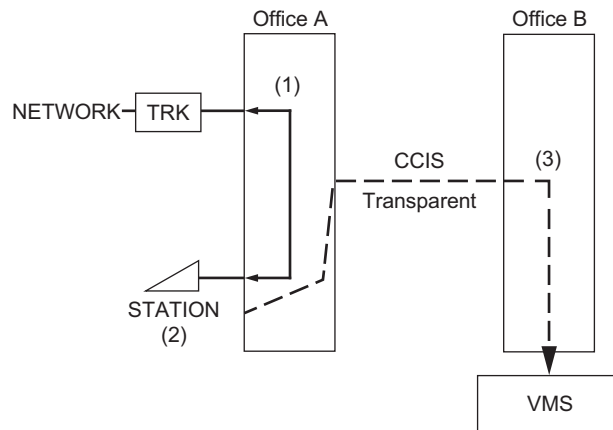
VMS: Voice mail station number

3. Follow the instructions given by the VMS.

VOICE MAIL LIVE RECORD-CCIS

General Description

This feature allows any station user in the CCIS network to record one's own conversation over the station into the VMS and play it simply by pushing the function key of the Multiline Terminal.



- (1): Conversation starts.
(2): Push the function key to record the conversation.
(3): The VMS starts recording it.

Programming

- For an office where a station is set to Voice Mail Live Record (Office A)

START	DESCRIPTION	DATA
CM90	Assign the Record/End key for Voice Mail Live Record-CCIS to a Multiline Terminal.	<ul style="list-style-type: none"> Y=00 (1) My Line Number + <input type="text"/> + Key No. (2) F5026: Record F5027: End F5028: Play
CM08	Specify the use of Record key assigned by CM90 Y=00: F5026 for Voice Mail Live Record-CCIS.	<ul style="list-style-type: none"> (1) 578 (2) 0 : Used as Record key and End key 1◀: Used as Record key
	Specify the Mail Box number to hear a message when the Play key for Voice Mail Live Record-CCIS is pressed while seizing a Sub Line.	<ul style="list-style-type: none"> (1) 675 (2) 0 : Mail Box number for My Line 1◀: Mail Box number for Sub Line
A		

	DESCRIPTION	DATA
A		
CM08	Specify sending of confirmation tone from the VMS to the calling and called party while Voice Mail Live Record-CCIS is executed.	(1) 579 (2) 0 : To send 1◀: Not sent
CM71	Assign the System Speed Dialing memory area used exclusively for Voice mail station number. NOTE: <i>This memory area is shared with Route Advance feature from Tie line to C.O. line. Therefore, assign the area as little as possible.</i>	(1) 66: Exclusive for Voice mail station No. (2) XXX YYY XXX: 000-299: Starting Memory Slot No. in Block YYY: 001-099: Number of Memory Slots to be assigned in Block
CM72	Assign the Voice mail station number to the memory slot number in slot allocated by CM71. NOTE: <i>If the Voice mail station number is set in open numbering system, you should set "Access Code + Area Code of the Voice mail station + the Voice mail station number".</i>	• Y=0 (1) 001-099: Memory Slot No. in block (2) XXXX [] YY...Y XXXX: Access Code (Maximum 4 digits) [] : Separator Mark YY...Y: Voice mail station No. (Maximum 8 digits)
CM50	Assign the abbreviated code of Voice mail station number for the Voice Mail Live Record-CCIS.	• Y=10 (1) 0 (2) 00-99 : Abbreviated code NONE◀: No data
END		

- For a VMS office (Office B)

START	DESCRIPTION	DATA
CM13	Provide Voice Mail Live Record-CCIS. NOTE: <i>Set the second data to "0" for all the VMS ports performing Voice Mail Live Record-CCIS.</i>	<ul style="list-style-type: none"> • Y=57 (1) X-XXXXXXXX: Voice mail station No. (2) 0: To provide
CM08	<p>Specify whether a Live Record start signal that includes caller information (such as station number and a kind of calling party) is sent to the VMS.</p> <p>Specify whether a release signal is sent to the VMS, when a station/trunk hangs up while accessing the VMS</p> <p>Specify whether MW lamp control on a station of an opposite office from the VMS via CCIS is available.</p> <p>NOTE: <i>2nd data=0 is effective only when CM08>702: 0.</i></p>	(1) 702 (2) 0 : To send 1◀: Not sent (1) 704 (2) 0 : To send 1◀: Not sent (1) 706 (2) 0 : Available 1◀: Not available
END		

Operating Procedure

To record and stop one's own conversation into the VMS:

1. Push the function key assigned by CM90 Y=00: F5026 during conversation. If your station connects to the VMS, then start recording. If not, the recording function is not available.
2. To stop recording, push the function key assigned by CM90 Y=00: F5026 (CM08>578: 0 is set), CM90 Y=00: F5027 (CM08>578: 1 is set) or release the line, and the recording automatically stops.
3. After you stop recording, Multiline Terminal returns to the normal status.

NOTE 1: *While recording, the operations such as hooking/holding is not available at both sides.*

NOTE 2: *Though the opposite side releases the line, the recording continues as long as the recording side doesn't stop recording.*

To play a record from the VMS:

There are two ways to play it.

One way is the same as VOICE MAIL INTEGRATION-CCIS. See that of Operating Procedure.

 [Page 1-254](#)

The other way is as follows.

1. Lift the handset and receive dial tone.
2. Push the function key assigned by CM90 Y=00, then you can hear the record from the VMS.

To clear a record from the VMS:

To forward a record to another station in the VMS:

1. Lift the handset and receive dial tone.
2. Dial the voice station number and receive ringback tone.

The LCD shows:

[**xxx**]

VMS: Voice mail station number

3. Follow the instructions given by the VMS.

VOICE MAIL PRIVATE PASSWORD-CCIS

General Description

Voice Mail Password can be prevented from displaying in LCD of Multiline Terminal when connected to the voice mail system via CCIS

Station Application

All Multiline Terminal with LCD

Programming

- For VMS office

START	DESCRIPTION	DATA
<div>CM12</div>	<p>Assign Service Restriction Class A to the VMS stations.</p> <p>NOTE 1: <i>This Service Restriction Class set to the VMS station is sent to the calling office when the VMS answers the call via CCIS.</i></p> <p><i>The calling office judges the called party as the VMS by the Service Restriction Class sent from the VMS office.</i></p> <p>NOTE 2: <i>VMS pilot and ports must be in a different Service Restriction Class than all other stations in that office.</i></p>	<ul style="list-style-type: none"> • Y=02 (1) X-XXXXXXXX: VMS Station No. (2) XX ZZ XX: 00-15◀: Service Restriction Class A
END		

- For call originating office

START	DESCRIPTION	DATA
CM15	<p>Allow Voice Mail Private Password-CCIS to Service Restriction Class A of the VMS on the opposite office.</p> <p>NOTE: <i>CM15 Y=147 is not effective for the Service Restriction Class of own office.</i></p>	<ul style="list-style-type: none"> • Y=147 <p>(1) 00-15: Service Restriction Class A (2) 0: Allow</p>
CM65	<p>Allow Voice Mail Private Password to each tenant.</p>	<ul style="list-style-type: none"> • Y=30 <p>(1) 00-63: Tenant No. (2) 0: Allow</p>
END		

Operating Procedure

Normal password entry to Voice Mail System.

THIS PAGE LEFT BLANK INTENTIONALLY.

Q-SIG FEATURES

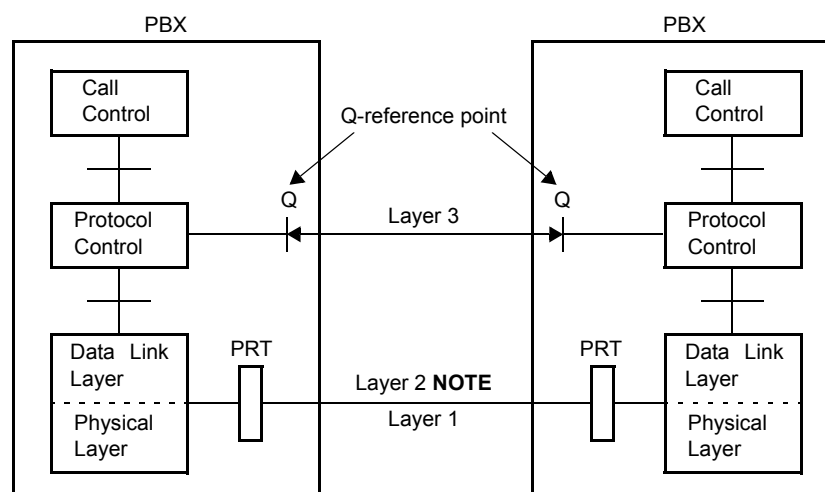
This chapter explains the system outline, system configuration, system conditions, available services, and programming procedure for Q-SIG system.

SYSTEM OUTLINE

Summary

This system provides the basic connection service for interfacing with the other PBX by using Layer 3 protocol which conforms to ETS 300 172. ETS 300 172 is standardized for private telecommunication network as Inter-exchange signaling protocol for circuit mode basic services by European Telecommunication Standards Institute (ETSI). The Q-SIG protocol creates Layer 3 messages between Q reference points expected as conceptual point for inter-office signalling.

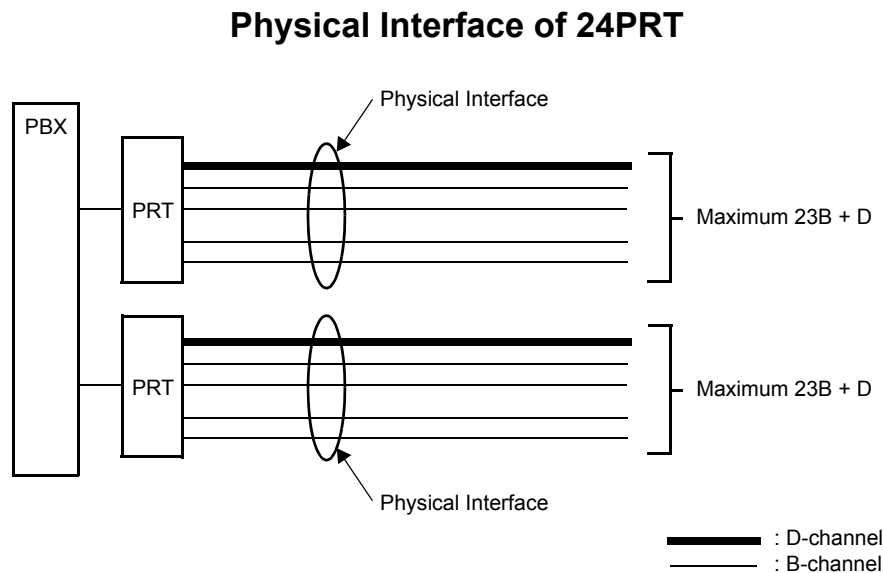
System Outline of Q-SIG



NOTE: *Conforming to Q921-a (PBX-PBX Interface)*

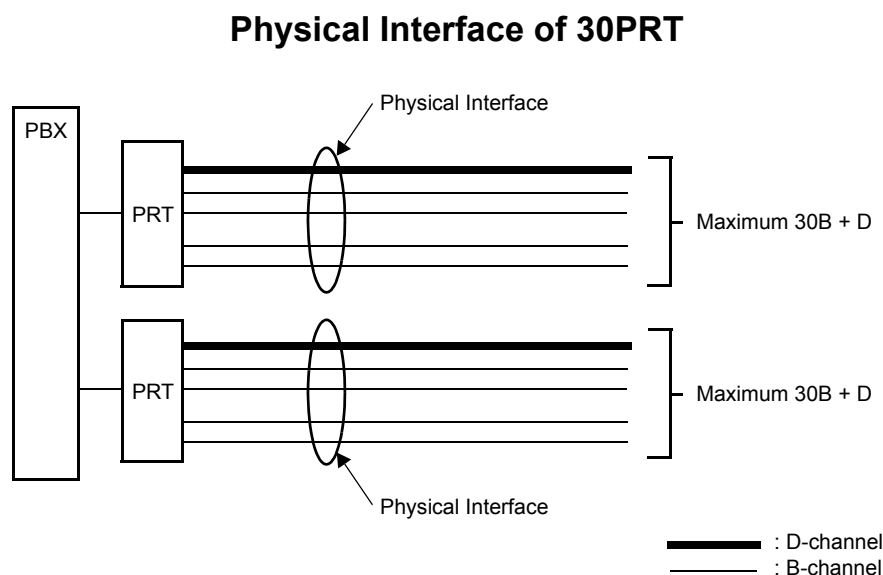
Physical Interface of 24PRT

On the Q-SIG system with 24PRT, a 1.5 Mbps primary rate interface is used for the interface trunk. The PRT provides a built-in D-channel handler. A single data link channel can control a maximum of 23 B-channels.



Physical Interface of 30PRT

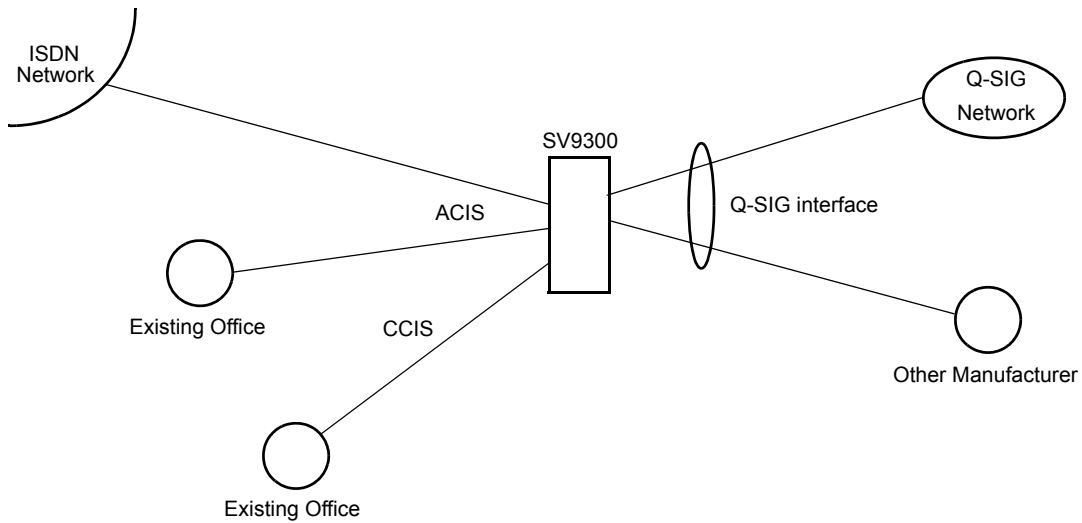
On the Q-SIG system with 30PRT, a 2 Mbps primary rate interface is used for the interface trunk. The PRT provides a built-in D-channel handler. A single data link channel can control a maximum of 30 B-channels.



Interworking with Other Network

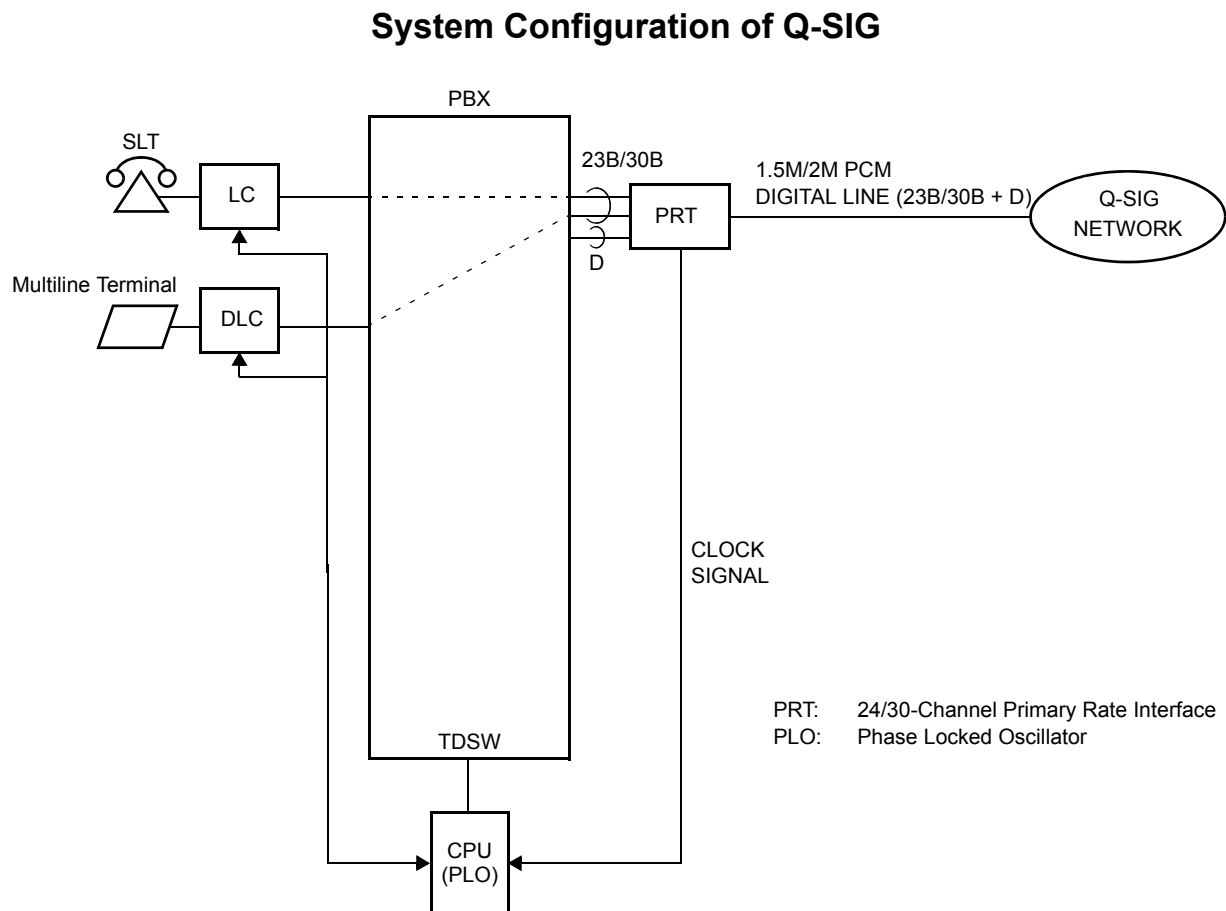
The PBX can be connected with the other manufacturer's PBX by the Q-SIG interface, and the Q-SIG network can interwork with the other network.

Interworking with Other Network



SYSTEM CONFIGURATION

The following figure shows the system configuration of the Q-SIG system.



PRT

The Primary Rate Interface Trunk (PRT) provides the Q-SIG Primary Rate Interface (1.5 Mbps PCM-23B+D/2 Mbps PCM-30B+D) and a built-in D Channel Handler (DCH). The PRT has the following functions.

For 24PRT:

- Unipolar/Bipolar Conversion (AMI/B8ZS Format)
- Alarm Detection/Insertion
- Loopback Test (Local Loopback)
- Cyclic Redundancy Checking (based on ITU-T Rec. G704)

For 30PRT:

- Unipolar/Bipolar Conversion (HDB3 Format)
- Alarm Detection/Insertion
- Loopback Test (Local Loopback)
- Cyclic Redundancy Checking (based on ITU-T Rec. G704)

For connection of a 24PRT and transmission line, twisted-pair cable can be used.

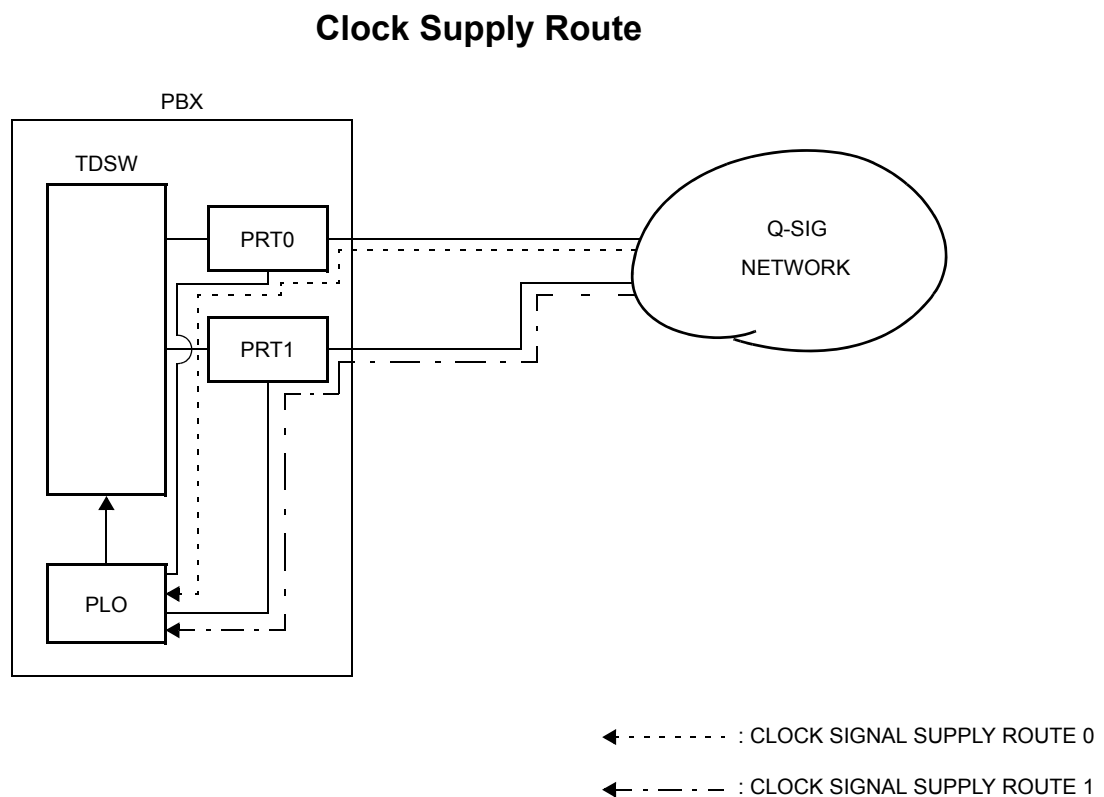
For connection of a 30PRT and transmission line, either coaxial cable or twisted pair cable can be used.

PLO

The Phase Locked Oscillator (PLO) equipped on the CPU blade is responsible to synchronize the system with Q-SIG clocks.

The PLO generates the clock signals according to the source clocks received from network. The source clock signals are extracted at PRT blades and supplied to the PLO. Two clock routes are available: one is the route 0 to receive clock signals from PRT0, and the other is a standby route 1 (PRT1) to receive clock signals when no clock signals appear on the route 0. When no clock signals come from either route 0 or route 1, the PLO keeps generating the clock signals at the frequency of the last source clock. The PLO can receive different frequency of source clocks from the route 0 and route 1.

The figure below shows an example of clock supply route.



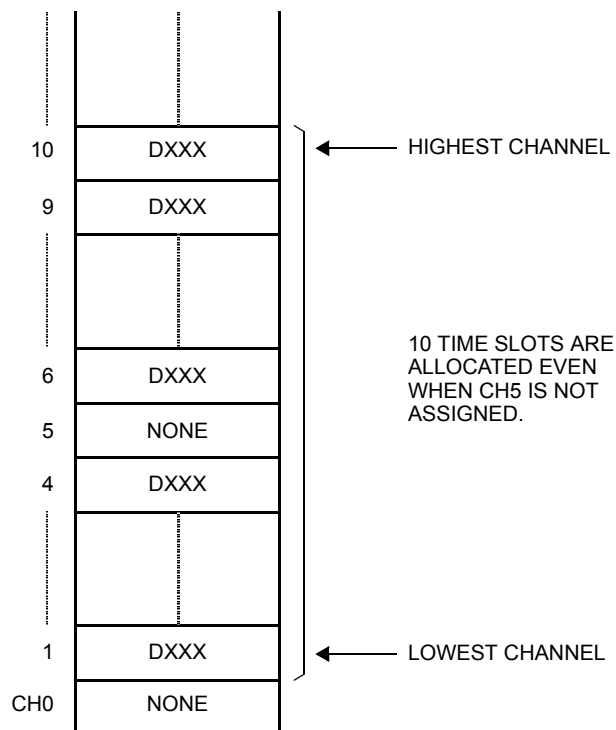
SYSTEM CONDITIONS

Time Slot Allocation for PRT Blade

On each PRT blade, the system recognizes the lowest and highest channel numbers to which trunk numbers have been assigned, and allocates time slots to all the channels within them. If trunk numbers are assigned to discontinuous channels in this case, the system also allocates time slots to channels not assigned.

For example, as shown below, even when Channel 1 through Channel 10 have been assigned by the system data programming (CM10 Y=00) excepting Channel 5, the system allocates a total of 10 time slots for all the ten channels. Therefore, to avoid allocation of unnecessary time slots, it is recommended that consecutive channels are assigned on each PRT blade.

Time Slot Allocation for PRT



SERVICES

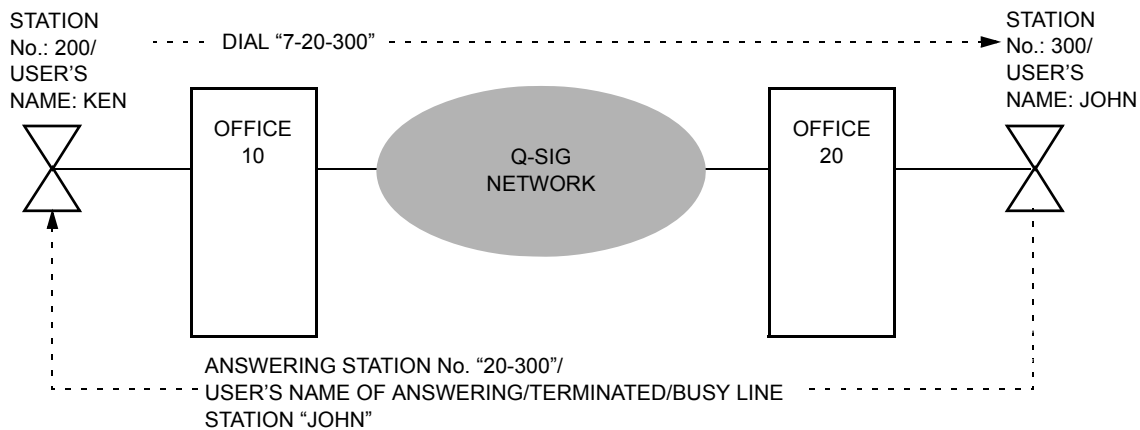
Connected Destination Indication/Calling Party Information Indication

This feature allows the LCD on stations/Attendant Consoles to indicate the connected destination information and calling party information sent from the opposite office.

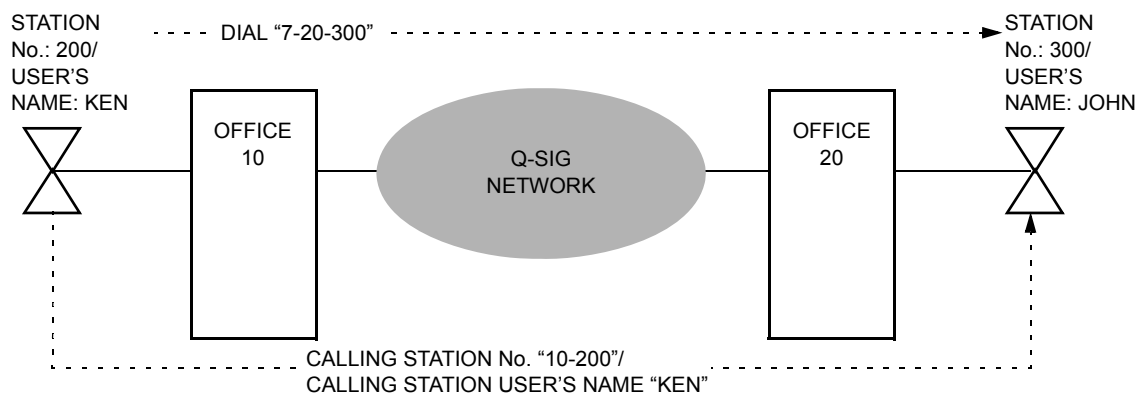
The station number or user's name of answering station/terminated station/busy line station sent from the opposite office can be indicated on the LCD of calling party, and the calling party number/name sent from the opposite office can be indicated on the LCD of called party.

Also, if you do not need the indications above-mentioned, restriction of them to each station is possible.

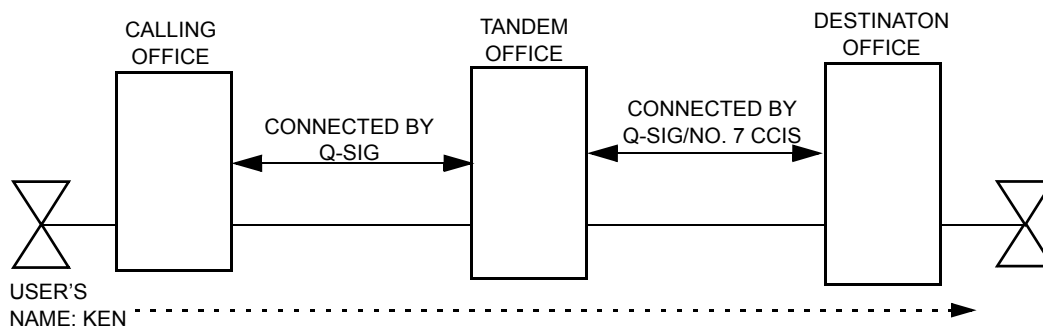
Connected Destination Indication



Calling Party Information Indication



- The LCD does not indicate the station number/user's name if the number/name is not sent from the opposite office.
- The following station number indications are available.
 - Indication of a calling station number to a called station.
 - Indication of an answering station number to a calling station.
- The following user's name indications are available.
 - Indication of a calling station user's name to a called station.
 - Indication of an answering station user's name to a calling station.
 - Indication of a terminated station user's name to a calling station.
 - Indication of a user's name whose line is busy to a calling station.
- The system can send/receive maximum of 16-digit station number/user's name.
If the received station number/user's name exceeds 16 digits, from the 1st digit to the 16th digit are sent to stations and the 17th digit and later are deleted.
- The system cannot receive the station number/user's name sent from an ISDN telephone.
- If the station is an ISDN telephone or a terminal which has no indicator, the station number/user's name cannot be indicated.
- There are following conditions for Attendant Console in this feature.
 - If the station number exceeds 6 digits, the last 6 digits are indicated on the LCD.
 - Attendant Console number cannot be sent.
 - Attendant Console user's name cannot be sent/received.
- It can be specified to each station (Single line Telephone/Multiline Terminal) whether a station number/user's name is sent or not, by system data programming.
- When offices are connected with tandem, the transit of user's name is available in the tandem office under the following conditions.



- A calling office and tandem office are connected by Q-SIG, and tandem office and destination office are connected by Q-SIG, in this case, maximum of 50-digit user's name transit is available.
- A calling office and tandem office are connected by Q-SIG, and tandem office and destination office are connected by No. 7 CCIS, in this case, maximum of 16-digit user's name transit is available.
- The user's name transit is available under the tandem connection above-mentioned only.

- Calling station user's name is also sent to the station which is terminated by call pickup.
- Even if the called station is in the state of consultation hold (call transfer), the called station user's name is sent to the calling station.
If the called station is in the state of call holding, the station user's name is not sent.
- Since a user's name of calling station is sent to the opposite office, if the called station provides the Call Forwarding-All Calls feature, the calling user's name is indicated on the LCD of terminated station.

PRT ASSIGNMENT

START	DESCRIPTION	DATA
CM05	Assign a Unit number and Slot number to the PRT blade.	<ul style="list-style-type: none"> Y=0 <ol style="list-style-type: none"> XX ZZ XX: 01-50: Unit No. ZZ : 01-18: Slot No. 45: PRT blade for Q-SIG
	Assign the Trunk Blade number to the PRT blade.	<ul style="list-style-type: none"> Y=1 <ol style="list-style-type: none"> XX ZZ XX: 01-50: Unit No. ZZ : 01-18: Slot No. 000-127: Trunk Blade No.
	Assign the number of Highway Channels for ISDN data communication.	<ul style="list-style-type: none"> Y=2 <ol style="list-style-type: none"> XX ZZ XX: 01-50: Unit No. ZZ : 01-03: Line/Trunk chassis No. 01-16: Number of Highway Channels for ISDN data communication
	<p>NOTE 1: When the second data of this command is set to NONE (No data), the PRT blade for ISDN data communication must be accommodated to the base slot (Slot No. 01/07/13) of each line trunk module. In this case, the available Highway Channels for data communication are the only first 16 channels.</p> <p>NOTE 2: When this command is set, additional chassis time slots are used. Example: CM05 Y=2>0101: 12 will use 12 chassis time slots.</p>	
CMAA	Specify the type of PRT blade.	<ul style="list-style-type: none"> Y=15 <ol style="list-style-type: none"> 000-127: Trunk Blade No. assigned by CM05 Y=1 0 : E1 (2 Mbps) 1 ◀: T1 (1.5 Mbps)
A		

A	DESCRIPTION	DATA
CMAA	Specify the cable length for PRT.	<ul style="list-style-type: none"> Y=19 <div>BLADE RESET</div> <ol style="list-style-type: none"> 000-127: Trunk blade No. assigned by CM05 Y=1 0 : 0-40 m (0-131.2 ft.) 1 : 41-81 m (134.5-265.7 ft.) 2 : 82-122 m (269.0-400.2 ft.) 3 : 123-162 m (403.4-531.4 ft.) 4 : 163-200 m (534.6-656 ft.) 7◀: 0-40 m (0-131.2 ft.)
CM10	Assign a Q-SIG trunk number to the PRT blade.	<ul style="list-style-type: none"> Y=00 <div>BLADE RESET</div> <ol style="list-style-type: none"> XX YY ZZ: Physical Port No. XX: 01-50: Unit No. YY: 01-18: Slot No. ZZ : 01-23: Circuit No. (B ch) of 24 PRT 24: Circuit No. (D ch) of 24 PRT ZZ : 01-15, 17-31: Circuit No. (B ch) of 30 PRT 16: Circuit No. (D ch) of 30 PRT D000-D511: Trunk No.
CM04	Assign the destination to receive the synchronous signal for PRT.	<ul style="list-style-type: none"> Y=10-59 <ol style="list-style-type: none"> 01: First priority 02: Second priority 01-18: Slot No.
B	<p>NOTE 1: This data is assigned for the clock synchronization of SV9300 for the opposite office of ISDN network/CCIS/Digital Tie Line. Do not assign this data for ISDN terminals.</p> <p>NOTE 2: The second data must be assigned the Slot number to which each interface blade (PRT/BRT/CCT/DTI) is accommodated (the first data 01 [first priority] is mandatory. Do not assign the first data 02 [second priority] only).</p> <p>NOTE 3: The connection to a SIP conversion adapter with BRT/PRT blade depends on whether the adapter can supply the clock or not. Do not assign this data for the BRT/PRT blade when the clock cannot be supplied.</p>	

	DESCRIPTION	DATA
<div>B</div> <div>CM30</div>	<p>Assign a trunk route to each Q-SIG trunk used for B channel (voice channel), and also to D channel (signaling channel).</p> <p>BLADE RESET</p> <p>NOTE 1: <i>PRT route must be separated from any analog trunk route.</i></p> <p>NOTE 2: <i>The trunk routes for D channel must be different from the trunk routes for B channel.</i></p> <p>Assign the trunk route data to each Q-SIG incoming trunk used for B channel only.</p>	<ul style="list-style-type: none"> Y=00 (1) 000-511: Trunk No. assigned by CM10 Y=00 (2) 00-63: B channel Trunk Route No. <ul style="list-style-type: none"> Y=00 (1) 000-511: Trunk No. assigned by CM10 Y=00 (2) 00-63: D channel Trunk Route No.
	<div>CM35</div> <p>Assign the trunk route data to the B channel trunk route number assigned by CM30 Y=00.</p> <p>NOTE: <i>CM35 Y=000, 004, 005, 009, and 020 should be assigned to only the B channel trunk routes. For D channel trunk route, no data setting is required.</i></p>	<ul style="list-style-type: none"> Y=02 Day Mode Y=03 Night Mode (1) 000-511: Trunk No. assigned by CM10 Y=00 (2) 31: Handling of busy <ul style="list-style-type: none"> Y=000 Kind of Trunk Route (1) 00-63: B channel Trunk Route No. (2) 04: Tie Line trunk <ul style="list-style-type: none"> Y=004 Answer signal from distant office (1) 00-63: B channel Trunk Route No. (2) 2: Answer signal arrives <ul style="list-style-type: none"> Y=005 Release signal from distant office (1) 00-63: B channel Trunk Route No. (2) 1◀: Release signal arrives <ul style="list-style-type: none"> Y=009 Incoming connection signaling BLADE RESET (1) 00-63: B channel Trunk Route No. (2) 03: Wink Start/CCIS <ul style="list-style-type: none"> Y=020 Outgoing connection signaling BLADE RESET (1) 00-63: B channel Trunk Route No. (2) 00: Wink Start/CCIS
C		

C	DESCRIPTION	DATA
CM35	Provide the cyclic redundancy checking for the D channel trunk route.	<ul style="list-style-type: none"> Y=089 <div style="border: 1px solid black; border-radius: 10px; padding: 2px; display: inline-block;">BLADE RESET</div> <ol style="list-style-type: none"> 00-63: D channel Trunk Route No. 0 : To provide 1◀: Not provided
	NOTE: <i>When the opposite office does not provide the cyclic redundancy checking (CRC) function, set the second data "1".</i>	
	Provide the B channel trunk routes and the D channel trunk route with No. 7 CCIS facilities.	<ul style="list-style-type: none"> Y=090 <ol style="list-style-type: none"> 00-63: B channel Trunk Route No. 0: No. 7 CCIS
		<ul style="list-style-type: none"> Y=090 <ol style="list-style-type: none"> 00-63: D channel Trunk Route No. 0: No. 7 CCIS
	Assign the CCH number to the B channel trunk routes and the D channel trunk route.	<ul style="list-style-type: none"> Y=091 <ol style="list-style-type: none"> 00-63: B channel Trunk Route No. 00-63: CCH No.
		<ul style="list-style-type: none"> Y=091 <ol style="list-style-type: none"> 00-63: D channel Trunk Route No. 00-63: CCH No.
	Assign the D channel number to the B channel trunk routes.	<ul style="list-style-type: none"> Y=093 <ol style="list-style-type: none"> 00-63: B channel Trunk Route No. 00-31: D channel No.
	Assign the LAPD mode of the D channel trunk route. This data setting must not be identical with the opposite PBX. If the opposite PBX is defined as a "Network Mode", set this data to 1 (User Mode).	<ul style="list-style-type: none"> Y=113 <ol style="list-style-type: none"> 00-63: D channel Trunk Route No. 0 : Network Mode 1◀: User Mode
	Provide the B channel trunk routes as the trunk routes for Q-SIG.	<ul style="list-style-type: none"> Y=196 <ol style="list-style-type: none"> 00-63: B channel Trunk Route No. 00: For Q-SIG
	Provide the B channel trunk routes with calling party number (1-8 digits) transfer to ISDN on tandem call from Q-SIG.	<ul style="list-style-type: none"> Y=245 <ol style="list-style-type: none"> 00-63: B channel Trunk Route No. 0 : To provide
D		

D	DESCRIPTION	DATA
CM30	Assign Circuit Identification Code (CIC) to each trunk number used for B channel.	<ul style="list-style-type: none"> Y=35 (1) 000-511: Trunk No. (2) 001-127: CIC
	RESET	
	<p>NOTE 1: <i>The Circuit Identification Code (CIC) represents a circuit number to designate a trunk (of each trunk route) used as a B channel in the No. 7 CCIS network. A CIC should not be assigned to a trunk used as a Common Signaling Channel.</i></p>	
	<p>NOTE 2: <i>This command must be assigned after CM35 Y=090 and CM35 Y=091 are assigned.</i></p>	
CMA7	Assign the trunk number to be used as the common signaling channel.	<ul style="list-style-type: none"> Y=00 (1) 00-63: CCH No. (2) 000-511: Trunk No. assigned by CM10 Y=00
	Assign an Originating Point Code (OPC) to each CCH number.	<ul style="list-style-type: none"> Y=01 (1) 00-63: CCH No. (2) 00001-16367: Originating Point Code
	RESET	
	<p>NOTE: <i>The Originating Point Code (OPC) is used to designate an originating office in the No. 7 CCIS network. A single OPC should be assigned to all CCH numbers provided in the same system.</i></p>	
E		

E	DESCRIPTION	DATA
CMA7	<p>Assign a Destination Point Code (DPC) to each CCH number.</p> <p>NOTE 1: <i>The Destination Point Code (DPC) is used to designate a terminating office in the No. 7 CCIS network. Usually a different DPC is assigned to each CCH number in the same system.</i></p> <p>NOTE 2: <i>For this DPC, assign an arbitrary value which is different from a value set by CMA7 Y=01.</i></p> <p>Assign the originating office number to each CCH number, if required.</p>	<ul style="list-style-type: none">Y=02(1) 00-63: CCH No.(2) 00001-16367: Destination Point Code
CMA9	<p>Assign the trunk number assigned by CM10 Y=00 to each D channel number for providing D channel path between PRT.</p> <p>BLADE RESET</p>	<ul style="list-style-type: none">Y=06(1) 00-63: CCH No.(2) 0000-9999: Originating Office No. <ul style="list-style-type: none">Y=00(1) 00-31: D channel No.(2) 000-511: Trunk No. assigned by CM10 Y=00
CM13	<p>Specify the function of Analog Data station (Single-Line Station with FAX or MODEM).</p> <p>NOTE 1: <i>This command is used to specify the information transfer capability of bearer capability.</i></p> <p>NOTE 2: <i>When the second data is set to 0 (3.1 kHz audio), the following limitations are applied.</i></p> <ul style="list-style-type: none">- Periodic Time Indication tones are not given to the line.- Override by other stations is restricted.- Ringing interval depends on as follows. <p><i>The ringing interval for the FAX station is as per the setting of ringing signal for FAX (CM04 Y=00>09) (default: as per CM04 Y=00>05).</i></p> <ul style="list-style-type: none">- Call Waiting Answer-Called Side is to be restricted by CM15 Y=44: 0. <p>NOTE 3: <i>For tandem connection, the information transfer capability is fixed to 3.1 kHz audio.</i></p>	<ul style="list-style-type: none">Y=07(1) X-XXXXXXXX: Station No.(2) 0 : Data station (3.1 kHz audio)1◀: Ordinary station (voice)
END		

- To execute Local Loopback for PRT, do the following data programming.

START	DESCRIPTION	DATA
CMAA	Set Local Loopback (PRT) ON.	<ul style="list-style-type: none"> • Y=22 Loopback setting (1) 000-127: Trunk Blade No. assigned by CM05 Y=1 (2) 1 : Remote Loop Back (for PRT) (FIFO unavailable) 2 : Payload Loop Back (for PRT) (maintenance bit unavailable) 3 : Remote Loop Back (for PRT) (FIFO available) 4 : Payload Loop Back (for PRT) (maintenance bit available) 7◀: Loop Back OFF (for PRT)
END		

- When the setting of more than 17 Highway Channels is required for a PRT blade, reassignment of the Highway Channel (111 ch) allocation is required to each physical slot (slot01-06/07-12/13-18). The programming for Highway Channel reassignment is as follows. For the details of Highway Channel reassignment, refer to “CMF7 Y=9” in Command Manual.

START	DESCRIPTION	DATA
CMF7	Reassign Highway Channel.	<ul style="list-style-type: none"> • Y=9 (1) XX YY XX: 01-50: Unit No. YY: 01/07/13: Lowest Slot No. within each Line/Trunk chassis (2) XX YY XX: 01-50: Unit No. YY: 06/12/18: Highest Slot No. within each Line/Trunk chassis
CME0	Execute the blade reset for all slots of the Unit accommodated the DTI/PRT/CCT blade.	<ul style="list-style-type: none"> • Y=3 (1) XX YY XX: 01-50: Unit No. YY: 01-18: Slot No. (2) XX YY XX: 01-50: Unit No. YY: 01-18: Slot No.
END		

CONNECTED DESTINATION INDICATION / CALLING PARTY INFORMATION INDICATION ASSIGN- MENT

- (1) To indicate the answering station number to the calling party or to indicate the calling party number to the called party, do the following programming.

If you do not need any indications, restrict them by CM15 Y=151.

START	DESCRIPTION	DATA
CM12	Assign Service Restriction Class A and Service Restriction Class B to the required stations.	<ul style="list-style-type: none"> Y=02 (1) X-XXXXXXXX: Station No. (2) XX ZZ <ul style="list-style-type: none"> XX: 00-15◀: Service Restriction Class A ZZ : 00-15◀: Service Restriction Class B
CM15	<p>Allow or Restrict Connected Destination Number Indication/Calling Party Number Indication in Service Restriction Class B assigned by CM12 Y=02.</p> <p>Allow Calling Number Display for incoming calls in Service Restriction Class A assigned by CM12 Y=02.</p>	<ul style="list-style-type: none"> Y=151 (1) 00-15: Service Restriction Class B assigned by CM12 Y=02 (2) 0 : Restricted 1◀: Allow Y=136 (1) 00-15: Service Restriction Class A assigned by CM12 Y=02 (2) 0: Calling Number Display
CM12	Assign an ISDN Subscriber number and ISDN Local Office Code Table number to required stations.	<ul style="list-style-type: none"> Y=12 (1) X-XXXXXXXX: Station No. (2) X-XXXX: ISDN Subscriber No. Y=13 (1) X-XXXXXXXX: Station No. (2) 00-14: ISDN Local Office Code Table No. 00-14
A		

A	DESCRIPTION	DATA
CM50	Assign ISDN Local Office Code to the Table number assigned by CM12 Y=13.	<ul style="list-style-type: none"> Y=05 (1) 00-14: ISDN Local Office Code Table No. 00-14 (2) X...X: Local Office Code (Maximum 12 digits)
	<p>NOTE: The ISDN number consists of the following numbers. ISDN number: <u>XXXXXXXXXXXX</u> <u>YYYY</u></p>	<p>ISDN subscriber No. assigned by CM12 Y=12 (1-4 digits)</p> <p>ISDN Local Office Code assigned by CM50 Y=05 (1-12 digits)</p>
	This number must be in the indial range assigned by Telecom for the ISDN line.	
	<p>For example:</p> <p>National Destination Code for Dallas: 214</p> <p>Local Code for a station: 518-5000</p> <p>In this case, the ISDN Number is</p> <p>National Destination Code + Local Code=214518-5000</p> <p>That is</p> <p>ISDN Subscribers No. assigned by CM12 Y=12 is 5000.</p> <p>ISDN Local Office Code assigned by CM50 Y=05 is 214518.</p>	
CM20	Assign the access code for LCR Group 0-3.	<ul style="list-style-type: none"> Y=0-3 Numbering Plan Group 0-3 (1) X-XXXX: Access Code (2) A126: LCR Group 0 A127: LCR Group 1 A128: LCR Group 2 A129: LCR Group 3
B		

B	DESCRIPTION	DATA
CM8A	Assign an Area Code Development Pattern number to each LCR Group.	<ul style="list-style-type: none"> Y=A000 (1) 0-3: LCR Group 0-3 (2) 4005-4007: Area Code Development pattern No. 5-7
	Assign a Route Pattern number to the digits to be dialed in the Area Code Development Pattern number assigned by CM8A Y=A000.	<ul style="list-style-type: none"> Y=4005-4007 Area Code Development Pattern No. 5-7 (1) X-X...X: Area Code 1-8 digits (2) 0000-0255: Route Pattern No. 000-255
	Specify the LCR selection priority for the Route Pattern number assigned by CM8A Y=4005-4007.	<ul style="list-style-type: none"> Y=0000-0255 Route Pattern No. 000-255 (1) 1: 1st priority 2: 2nd priority 3: 3rd priority 4: 4th priority (2) XXX ZZ XXX: 000-255: LCR Pattern No. ZZ : 00-63: Trunk Route No.
	Add the Calling Party Number for ISDN calls via CCIS/Q-SIG route.	<ul style="list-style-type: none"> Y=5000-5255 LCR Pattern No. 000-255 (1) 165: Caller ID of outgoing call by CCIS/Q-SIG (2) 0: To add
CM08	Provide the system with the Calling Name Display feature for CCIS calls.	(1) 379: Calling Name Display for CCIS calls (2) 1◀: To provide
CMA7	Provide each CCH number with Name Display feature.	<ul style="list-style-type: none"> Y=26 Name Display (1) 00-63: CCH No. (2) 1◀: To provide
	Provide Calling Party Information transfer service.	<ul style="list-style-type: none"> Y=28 Calling Party Information transfer service (1) 00-63: CCH No. (2) 1◀: To provide
<u>END</u>		

- (2) To indicate the user's name of answering station/terminated station/busy line station to the calling party or to indicate the calling party name to the called party, do the following programming. If you do not need any indications, restrict them by CM15 Y=152.

START	DESCRIPTION	DATA
CM12	Assign Service Restriction Class A and Service Restriction Class B to the required stations.	<ul style="list-style-type: none"> Y=02 (1) X-XXXXXXXX: Station No. (2) XX ZZ <ul style="list-style-type: none"> XX: 00-15◀: Service Restriction Class A ZZ : 00-15◀: Service Restriction Class B
CM15	<p>Allow or Restrict Connected Destination Name Indication/Calling Party Name Indication in Service Restriction Class B assigned by CM12 Y=02.</p> <p>Allow Calling Name Display for incoming calls in Service Restriction Class A assigned by CM12 Y=02.</p>	<ul style="list-style-type: none"> Y=152 (1) 00-15: Service Restriction Class B assigned by CM12 Y=02 (2) 0 : Restricted 1◀: Allow Y=136 (1) 00-15: Service Restriction Class A assigned by CM12 Y=02 (2) 1◀: Calling Name Display
CM08	Provide the system with the Calling Name Display feature for CCIS calls.	(1) 379: Calling Name Display for CCIS calls (2) 1◀: To provide
CM35	Specify the Object ID of Q-SIG Facility Information Element.	<ul style="list-style-type: none"> Y=197 (1) 00-63: B channel Trunk Route No. (2) 0 : Global 1◀: Local
CMA7	Provide each CCH number with Name Display feature.	<ul style="list-style-type: none"> Y=26 Name Display (1) 00-63: CCH No. (2) 1◀: To provide
A		

A	DESCRIPTION	DATA
CM77	Enter the desired user's name to each station number with Character Codes or characters. NOTE 1: <i>For the calling party user's name setting, use A-Z (capital), 0-9, or spaces.</i> NOTE 2: <i>There are two ways to change a name that currently programmed. By overwriting with a new name, or by inserting a blank space as the first character will cancel existing name.</i>	<ul style="list-style-type: none">• Y=0 By Character Code<ol style="list-style-type: none">(1) X-XXXXXXXX: Station No.(2) Character Code 20-7F: Maximum 32 digits See CM77 in the Command Manual.• Y=1 By Character<ol style="list-style-type: none">(1) X-XXXXXXXX: Station No.(2) A-Z, 0-9: Character Maximum 16 characters
<u>END</u>		

CALLED PARTY NUMBER ASSIGNMENT

START	DESCRIPTION	DATA
CM20	Assign the access code for LCR Group 0-3.	<ul style="list-style-type: none"> Y=0-3 Numbering Plan Group 0-3 <ol style="list-style-type: none"> (1) X-XXXX: Access Code (2) A126: LCR Group 0 A127: LCR Group 1 A128: LCR Group 2 A129: LCR Group 3
CM8A	Assign an Area Code Development Pattern number to each LCR Group.	<ul style="list-style-type: none"> Y=A000 <ol style="list-style-type: none"> (1) 0-3: LCR Group 0-3 (2) 4005-4007: Area Code Development pattern No. 5-7
	Assign a Route Pattern number to the digits to be dialed in the Area Code Development Pattern number assigned by CM8A Y=A000.	<ul style="list-style-type: none"> Y=4005-4007 Area Code Development Pattern No. 5-7 <ol style="list-style-type: none"> (1) X-X...X: Area Code 1-8 digits (2) 0000-0255: Route Pattern No. 000-255
	Specify the LCR selection priority for the Route Pattern number assigned by CM8A Y=4005-4007.	<ul style="list-style-type: none"> Y=0000-0255 Route Pattern No. 000-255 <ol style="list-style-type: none"> (1) 1: 1st priority 2: 2nd priority 3: 3rd priority 4: 4th priority (2) XXX ZZ XXX: 000-255: LCR Pattern No. ZZ : 00-63: Trunk Route No.
	For area code deletion, designate the digits to be deleted, if required. (To delete all digits of the area code.)	<ul style="list-style-type: none"> Y=5000-5255 LCR Pattern No. 000-255 <ol style="list-style-type: none"> (1) 152: Deletion of all digits of the area code assigned by CM8A Y=4005-4007 (2) 0: To delete
A		

A	DESCRIPTION	DATA
CM8A	<p>For area code deletion, designate the digits to be deleted, if required. (To delete the designated digit of an area code assigned by CM8A Y=4005-4007.)</p>	<ul style="list-style-type: none"> Y=5000-5255 LCR Pattern No. 000-255 (1) 153: Designation of digit to be deleted (2) 00 : No digit deletion 01-10 : First 1-10 digits deletion NONE◀: No digit deletion
	<p>For area code addition, designate the digits to be added, if required.</p>	<ul style="list-style-type: none"> Y=5000-5255 (1) 100: Designation of Digit Addition Pattern No. (2) 9000-9255: Digit Addition Pattern No. 000-255 NONE◀ : No digit addition Y=9000-9255 Digit Addition Pattern No. 000-255 (1) 0: Entry of digit code to be added (2) X-X...X: Digits to be added (Maximum 32 digits)
CM85	<p>Specify the maximum number of sending digits dialed by the calling party. The maximum number of sending digits (including the area codes) should be assigned to each area code.</p>	<ul style="list-style-type: none"> Y=0-7 Area Code Development Pattern No. 0-7 assigned by CM8A Y=A000 (1) X-X...X: Area Code dialed 1-8 digits (2) 01-24◀: 1-24 digits 25-79 : 25-79 digits
B		

B	DESCRIPTION	DATA																																								
CM8A	Assign Type of Number of called party number.	<ul style="list-style-type: none">Y=5000-5255 LCR/TR Pattern No. 000-255 <p>(1) 157: Type of Number of Called Party Number</p> <p>(2)</p> <table><tr><td>00</td><td>: Unknown</td><td rowspan="8">For E.164</td></tr><tr><td>01</td><td>: International number</td></tr><tr><td>02</td><td>: National number</td></tr><tr><td>03</td><td>: Not used</td></tr><tr><td>04</td><td>: Subscriber number</td></tr><tr><td>05</td><td>: Not used</td></tr><tr><td>06</td><td>: Not used</td></tr><tr><td>07</td><td>: Not used</td></tr><tr><td>NONE</td><td>◀: Unknown</td><td></td></tr></table> <table><tr><td>00</td><td>: Unknown</td><td rowspan="8">For private numbering plan</td></tr><tr><td>01</td><td>: Level 2 regional number</td></tr><tr><td>02</td><td>: Level 1 regional number</td></tr><tr><td>03</td><td>: PSTN specific number</td></tr><tr><td>04</td><td>: Local number</td></tr><tr><td>05</td><td>: Not used</td></tr><tr><td>06</td><td>: Abbreviated number</td></tr><tr><td>07</td><td>: Not used</td></tr><tr><td>NONE</td><td>◀: Unknown</td><td></td></tr></table>	00	: Unknown	For E.164	01	: International number	02	: National number	03	: Not used	04	: Subscriber number	05	: Not used	06	: Not used	07	: Not used	NONE	◀: Unknown		00	: Unknown	For private numbering plan	01	: Level 2 regional number	02	: Level 1 regional number	03	: PSTN specific number	04	: Local number	05	: Not used	06	: Abbreviated number	07	: Not used	NONE	◀: Unknown	
00	: Unknown	For E.164																																								
01	: International number																																									
02	: National number																																									
03	: Not used																																									
04	: Subscriber number																																									
05	: Not used																																									
06	: Not used																																									
07	: Not used																																									
NONE	◀: Unknown																																									
00	: Unknown	For private numbering plan																																								
01	: Level 2 regional number																																									
02	: Level 1 regional number																																									
03	: PSTN specific number																																									
04	: Local number																																									
05	: Not used																																									
06	: Abbreviated number																																									
07	: Not used																																									
NONE	◀: Unknown																																									
C																																										

	DESCRIPTION	DATA
<div>C</div> <div>CM8A</div> <div>END</div>	Assign the Called Party Numbering Plan Identifier.	<ul style="list-style-type: none">Y=5000-5255 LCR/TR Pattern No. 000-255(1) 158: Called Party Numbering Plan Identifier(2) 00 : Unknown 01 : ISDN/Telephone Numbering Plan (E.164) 02 : Not used 03 : Data Numbering Plan (X.121) 04 : Telex Numbering Plan (F.69) 05 : Not used 06 : Not used 07 : Not used 08 : National Numbering Plan 09 : Private Numbering Plan NONE◀: No data

Q-SIG FEATURE PROGRAMMING

- Overlap Sending-Q-SIG **[For EMEA/Russia]**  [Page 2-29](#)
- Overlap Receiving-Q-SIG **[For EMEA/Russia]**  [Page 2-32](#)

OVERLAP SENDING-Q-SIG

[For EMEA/Russia]

START	DESCRIPTION	DATA
CM35	Assign the Area Code Development Pattern number for Toll Restriction and maximum digit analysis to each trunk route.	<ul style="list-style-type: none"> Y=076 (1) 00-63: Trunk Route No. (2) 00-07: Area Code Development Pattern No. 0-7 15◀ : Not used
	Assign the Q-SIG call origination procedure.	<ul style="list-style-type: none"> Y=206 (1) 00-63: Trunk Route No. (2) 0 : En-bloc call origination and overlap call origination 1◀ : En-bloc call origination only
	Assign the number of division digits.	<ul style="list-style-type: none"> Y=207 (1) 00-63: Trunk Route No. (2) 00-31: 0 digit-31 digits 63◀ : No data
CM85	Specify the maximum number of sending digits to be dialed by Calling Party.	<ul style="list-style-type: none"> Y=0-7 Area Code Development Pattern No. 0-7 assigned by CM8A Y=A000 (1) X-X...X: Area code dialed, Maximum 8 digits (2) 01-79: 1 digit-79 digits 24◀ : 24 digits
END		

In addition to the programming for Overlap Sending-Q-SIG, do the following data programming.

[Russia Only]

START	DESCRIPTION	DATA
<div>CM35</div>	<p>Specify whether Dial Tone (DT) is sent to calling party of opposite office when receiving the SETUP message by Overlap Receiving-Q-SIG.</p> <p>NOTE 1: <i>This command can be also used to specify whether the SETUP message does not contain a called party number is enabled or not. When “the SETUP message does not contain a called party number message” is not enabled, assign the second data to “0”.</i></p> <p>NOTE 2: <i>This command should be assigned to incoming trunk route when sending DT to calling party.</i></p> <p>NOTE 3: <i>This command should be assigned to both incoming trunk route and outgoing trunk when “the message does not contain a called party number” is not enabled.</i></p> <p>Assign Progress Description by Overlap Receiving-Q-SIG.</p> <p>NOTE 1: <i>This command is effective when the second data of CM35 Y=244 is assigned to “0”.</i></p> <p>NOTE 2: <i>This command should be assigned to incoming trunk route.</i></p>	<ul style="list-style-type: none"> Y=244 <p>(1) 00-63: Trunk Route</p> <p>(2) 0 : To send DT of own office 1◀: Not sent</p> <ul style="list-style-type: none"> Y=272 <p>(1) 00-63: Trunk Route</p> <p>(2) 1-4, 8: Progress Description 15◀: No data</p>
<div>A</div>		

A

CM35

DESCRIPTION

Specify whether Dial Tone (DT) is sent to calling party of opposite office when receiving the SETUP ACK message by Overlap Sending-Q-SIG.

NOTE: *This command should be assigned to outgoing trunk route.*

Assign Progress Description by Overlap Sending-Q-SIG.

NOTE 1: *This command is effective when the second data of CM35 Y=270 is assigned to "1".*

NOTE 2: *This command should be assigned to outgoing trunk route.*

Specify whether the called party number is sent to outgoing trunk route before receiving all digits of the called party number in tandem connection (Q-SIG to Q-SIG).

NOTE: *This command should be assigned to incoming trunk route of tandem office.*

DATA

- Y=270
 - (1) 00-63: Trunk Route
 - (2) 0 : To send DT of own office
1 : To send DT of own office when received Progress Description is not same as the Progress Description assigned by CM35 Y=271 (Not sent when Progress Description is same as the Progress Description)
2 : To send DT from opposite office own office (Not sent when DT is not sent from opposite office)
3◀: Not sent
- Y=271
 - (1) 00-63: Trunk Route
 - (2) 1-4, 8: Progress Description
15◀: No data
- Y=273
 - (1) 00-63: Trunk Route
 - (2) 0 : To send
1◀: Not sent

END

OVERLAP RECEIVING-Q-SIG

[For EMEA/Russia]

START	DESCRIPTION	DATA
CM20	Assign the Station Numbering Plan data to the leading one, two, three or four digits of station number.	<ul style="list-style-type: none"> Y=0-3 Numbering Plan Group 0-3 <ol style="list-style-type: none"> (1) X-XXXX: Leading 1-4 digits of Station No. (2) 801: 1 digit Station No. 802: 2 digits Station No. 803: 3 digits Station No. 804: 4 digits Station No. 805: 5 digits Station No. 806: 6 digits Station No. 807: 7 digits Station No. 808: 8 digits Station No.
	Assign the access code for LCR Group 0-3.	<ul style="list-style-type: none"> Y=0-3 Numbering Plan Group 0-3 <ol style="list-style-type: none"> (1) X-XXXX: Access code (2) A126: LCR Group 0 A127: LCR Group 1 A128: LCR Group 2 A129: LCR Group 3
CM8A	Assign an Area Code Development Pattern number to each LCR Group.	<ul style="list-style-type: none"> Y=A000 <ol style="list-style-type: none"> (1) 0-3: LCR Group 0-3 (2) 4000-4007: Area Code Development Pattern No. 0-7
	Assign a Route Pattern number to each area code for the Area Code Development Pattern number assigned by CM8A Y=A000.	<ul style="list-style-type: none"> Y=4000-4007 Area Code Development Pattern No. 0-7 <ol style="list-style-type: none"> (1) X-X...X: Area Code, Maximum 8 digits (2) 0000-0255: Route Pattern No. 000-255
A		

A	DESCRIPTION	DATA
CM8A	Specify the order of LCR selection for the Route Pattern number assigned by CM8A Y=4000-4007.	<ul style="list-style-type: none"> Y=0000-0255 Route Pattern No. 000-255 (1) 1-4: Order of LCR Selection <ul style="list-style-type: none"> 1: 1st 2: 2nd 3: 3rd 4: 4th (2) XXX ZZ XXX: 000-255: LCR Pattern No. 000-255 ZZ : 00-63: Trunk Route No. 00-63
	For area code addition, designate the digits to be added.	<ul style="list-style-type: none"> Y=5000-5255 (1) 100: Designation of digit Addition Pattern No. (2) 9000-9255: Digit Addition Pattern No. 000-255 NONE◀ : No digit addition Y=9000-9255 Digit Addition Pattern No. 000-255 (1) 0 (2) X-X...X: Digits to be added (Maximum 32 digits) X=0-9, A (*), B (#), C (Fixed Pause), D (Programmable Pause)
	For area code deletion, designate the digits to be deleted.	<ul style="list-style-type: none"> Y=5000-5255 LCR Pattern No. 000-255 (1) 152: Deletion of all digits of the area code assigned by CM8A Y=4000-4007 (2) 0 : To delete 1◀: Not deleted
CM35	To distinguish the maximum number of digits received from Q-SIG for each trunk route, specify an Area Code Development Pattern number to each trunk route number.	<ul style="list-style-type: none"> Y=202 (1) 00-63: Trunk Route No. (2) 00-07: Area Code Development Pattern No. 0-7 15◀ : Not used
B	Provide the Overlap Receiving-Q-SIG feature for each trunk route.	<ul style="list-style-type: none"> Y=203 (1) 00-63: Trunk Route No. (2) 0 : To provide

	DESCRIPTION	DATA
B		
CM85	Specify the maximum number of sending digits to be dialed by calling party. The maximum number of sending digits including the area codes should be assigned to each area code.	<ul style="list-style-type: none"> Y=0-7 Area Code Development Pattern No. 0-7 assigned by CM8A Y=A000 (1) X-X...X: Area code dialed, Maximum 8 digits (2) 01-24◀: 1 digit-24 digits 25-79 : 25 digits-79 digits
CM08	Specify the system operation when the PBR/ T302 time out occurs.	(1) 655 (2) 0 : Stop connecting 1◀: Keep connecting
CM41	Specify the timing for the PBR timer and T302 timer.	<ul style="list-style-type: none"> Y=0 (1) 112 (2) 03-99: 3-99 seconds (1 second increments) If no data is set, the default setting is 6 seconds.
END		

In addition to the programming for Overlap Receiving-Q-SIG, do the following data programming.

[Russia Only]

START	DESCRIPTION	DATA
CM35	<p>Specify whether Dial Tone (DT) is sent to calling party of opposite office when receiving the SETUP message by Overlap Receiving-Q-SIG.</p> <p>NOTE 1: <i>This command can be also used to specify whether “the SETUP message does not contain a called party number” is enabled or not. When “the SETUP message does not contain a called party number message” is not enabled, assign the second data to “0”.</i></p> <p>NOTE 2: <i>This command should be assigned to incoming trunk route when sending DT to calling party.</i></p> <p>NOTE 3: <i>This command should be assigned to both incoming trunk route and outgoing trunk when “the message does not contain a called party number” is not enabled.</i></p> <p>Assign Progress Description by Overlap Receiving-Q-SIG.</p> <p>NOTE 1: <i>This command is effective when the second data of CM35 Y=244 is assigned to “0”.</i></p> <p>NOTE 2: <i>This command should be assigned to incoming trunk route.</i></p>	<ul style="list-style-type: none"> Y=244 <p>(1) 00-63: Trunk Route (2) 0 : To send DT of own office 1◀: Not sent</p> <ul style="list-style-type: none"> Y=272 <p>(1) 00-63: Trunk Route (2) 1-4, 8: Progress Description 15◀: No data</p>
A		

A

CM35

DESCRIPTION

Specify whether Dial Tone (DT) is sent to calling party of opposite office when receiving the SETUP ACK message by Overlap Sending-Q-SIG.

NOTE: *This command should be assigned to outgoing trunk route.*

Assign Progress Description by Overlap Sending-Q-SIG.

NOTE 1: *This command is effective when the second data of CM35 Y=270 is assigned to "1".*

NOTE 2: *This command should be assigned to outgoing trunk route.*

Specify whether the called party number is sent to outgoing trunk route before receiving all digits of the called party number in tandem connection (Q-SIG to Q-SIG).

NOTE: *This command should be assigned to incoming trunk route of tandem office.*

DATA

- Y=270
 - (1) 00-63: Trunk Route
 - (2) 0 : To send DT of own office
1 : To send DT of own office when received Progress Description is not same as the Progress Description assigned by CM35 Y=271 (Not sent when Progress Description is same as the Progress Description)
2 : To send DT from opposite office own office (Not sent when DT is not sent from opposite office)
3◀: Not sent
- Y=271
 - (1) 00-63: Trunk Route
 - (2) 1-4, 8: Progress Description
15◀: No data
- Y=273
 - (1) 00-63: Trunk Route
 - (2) 0 : To send
1◀: Not sent

END

REMOTE UNIT OVER IP FEATURES

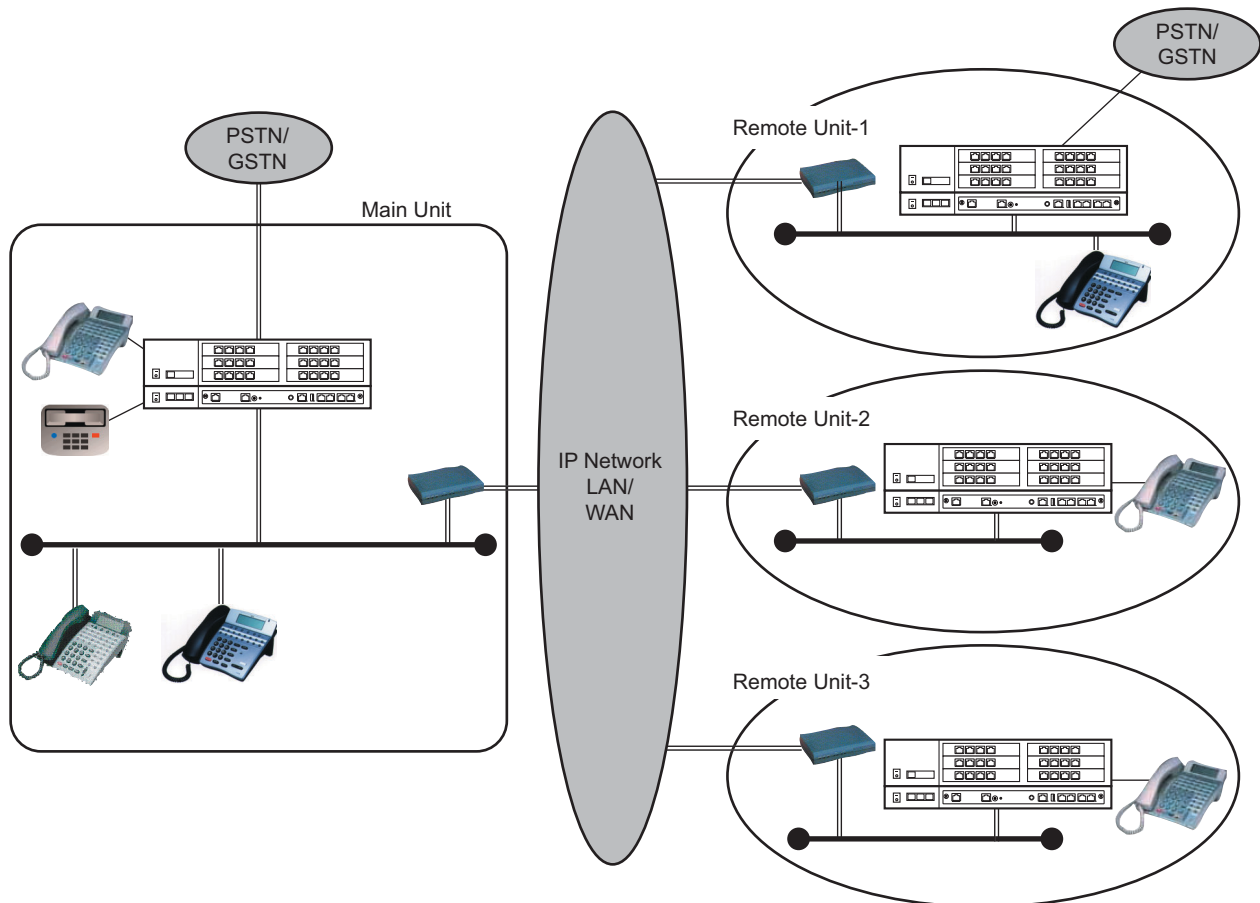
This chapter explains the system outline, system conditions, programming procedure, and sample setup for Remote UNIT over IP system.

SYSTEM OUTLINE

When SV9300 Units are installed at Remote Unit, and connected to a Main Unit over IP network, the Main Unit system controls and maintains the operation of Remote Units as one single system. If a communication failure occurs between the Main Unit and Remote Unit, the Remote Unit automatically changes over to a survival mode and operates as a stand-alone system.

Following figure shows an image of Remote UNIT over IP system.

System Outline of Remote UNIT over IP



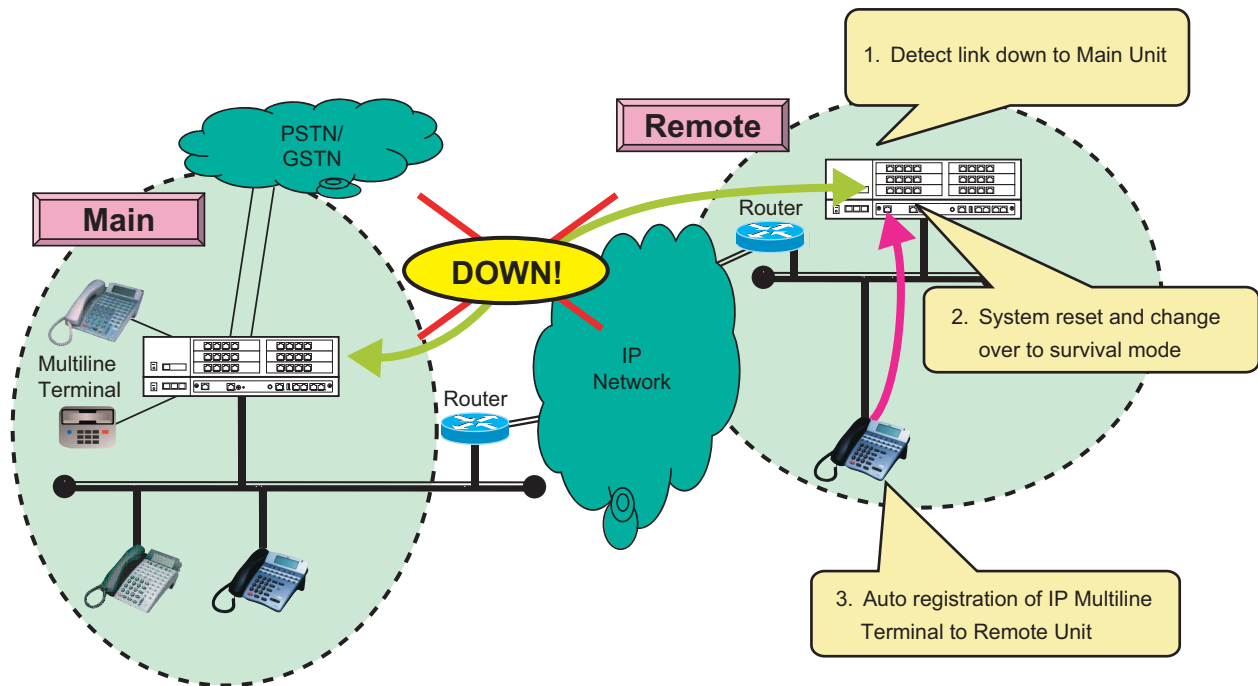
Outline of System Operation

- The CPU blade of Main Unit controls call processing, and Remote Unit follows the Main Unit in normal operation mode.
- Remote Unit can accommodate analog Single Line telephones, Multiline Terminal, IP Station, and LT/AP blades.
- Local Switch (TDSW) at Remote Unit connects an outside party when the Remote Unit is directly connected to the PSTN/GSTN (Remote Unit-1 in the above figure).
- In the case of connections between Main Unit and Remote Unit, or Remote Unit and Remote Unit, the voice path is connected via Peer-to-Peer or VoIPDB.
- If the communications between Main Unit and Remote Unit are interrupted, the Remote Unit starts a survival mode operation after the system reset.

Outline of Survival Mode Operation

- Remote Unit system watches a Keep Alive signal sent from Main Unit regularly.
- If a line failure occurs (Keep Alive signal is not received), Remote Unit resets the own system and starts survival mode operation as a stand-alone system to control the call processing within the Remote Unit.
- During survival mode operation, Remote Unit system checks regularly whether the communications with Main Unit is possible or not. When the Remote Unit regards that the communications are possible, the Remote Unit will change over to the normal mode to communicate with the Main Unit automatically or manually.

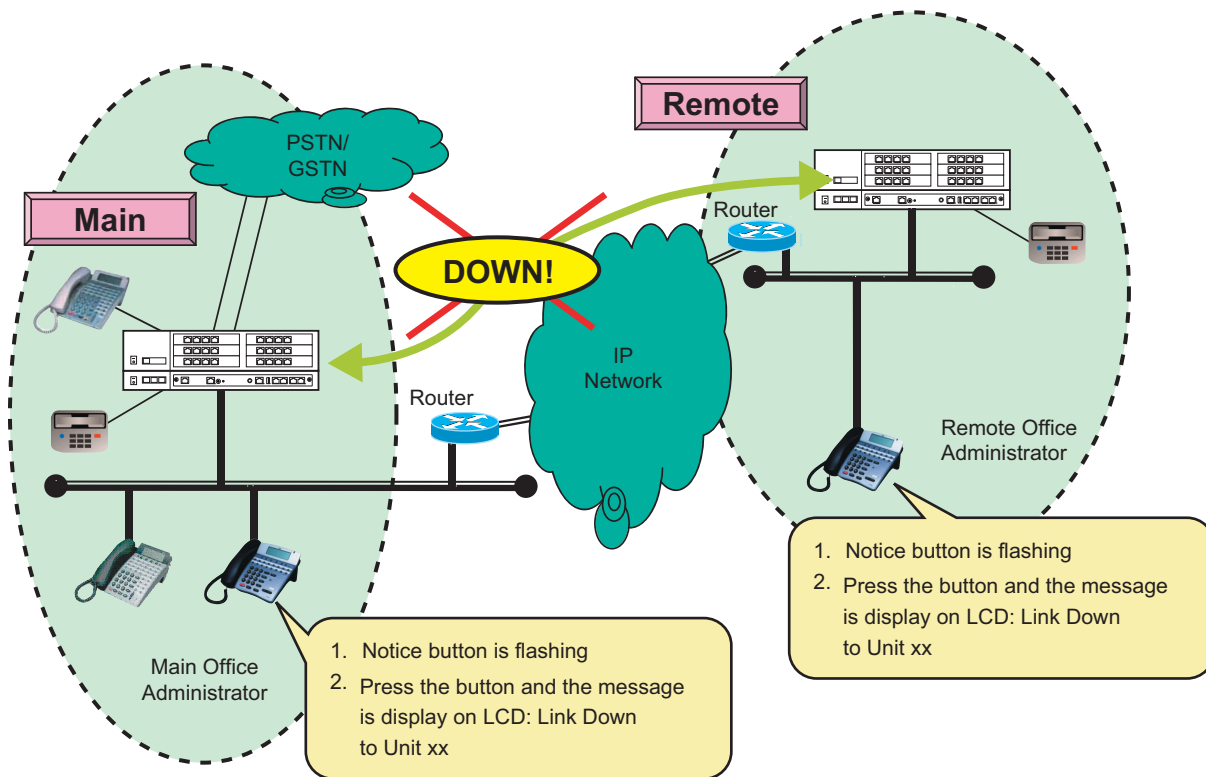
Survival Mode Operation Outline



Outline of Link Down Notice

This feature allows the link state between Main Unit and Remote Unit to display on the designated Multiline Terminal or IP Station at both units, and allows users at both units to notice the link failure.

Link Down Notice Outline



Outline of User Mobility

In a Remote UNIT over IP system, when an IP Station user and IP Station or only an IP Station user moves to another unit, in the destination unit (visitor unit) this feature allows the IP Station user to use the station number that had been used in the original unit (home unit).

SYSTEM CONDITIONS

General Conditions

- The CPU software versions have to be same in Main Unit and Remote Units.
- For Remote UNIT over IP feature, VoIPDB in each Unit is required.
- The number of accommodated terminals/trunks in Main Unit and Remote Unit should be a maximum of 2048 ports in the whole system.
- The TCP/IP network is required between Main Unit and Remote Unit. The closed and bandwidth guaranteed network is preferable, such as IP-VPN (Layer 3 VPN) or wide area Ethernet service (Layer 2 VPN). The following table shows the permissible delay time in the network.

Recommended/ Maximum Value	Permissible delay time	
	One-way	Return-way
Recommended Value	100 ms.	200 ms.
Maximum Value	120 ms.	240 ms.

If the network is short of the requirement, it may cause the delay operation of system, the delay and deterioration of voice packets, disconnection of calls, and frequent changeover to survival mode at Remote Unit.

- The CPU blade of Remote Unit has the same system data as that of Main Unit, because Remote Unit automatically gets the data from Main Unit when Remote Unit starts. In normal operation, Main Unit automatically copies the system data to Remote Unit through the network at the time set by CM43 Y=7 once a day.
- This feature is not compatible with Fusion service of 2400 IPX.
- The RUN LED of Remote Units' CPU blade flash at 60 IPM in normal mode and 120 IPM in survival mode.
- When the CPU blade/VoIPDB/IP Station is connected to the port of switching HUB that Spanning Tree (IEEE 802.1d) is enabled, communication failures shown below may occur. Disable the Spanning Tree feature to the connection port on the switching HUB.
 - IP Station fails to connect to SV9300.
 - IP Station cannot communicate with the IP Station.
 - IP Station cannot communicate with the SLT/Digital Multiline Terminal.
 - Remote Unit cannot change over to the normal mode in the Remote UNIT over IP system.Also, disable the Spanning Tree feature as for the following connections.
 - Connections between Units
 - Remote Unit/Dual CPU system/Failover
 - IP trunk/SIP trunk
 - Application connections such as PCPro/SMDR

Conditions for License

- The same number of License for Remote Unit license as the number of Remote Units are required for Remote UNIT over IP system.
- Regardless of Main Unit or Remote Unit, SV9300 consumes the number of ports or licenses in order of stating up blades, or in order of connecting IP terminals.
- When the number of port and number of license of License data are insufficient, it causes the IP terminal connection failure.
- After License data is loaded to the Main Unit, the service, number of port, and number of license to be used by each Remote Unit are sent to the flash memory of each Remote Unit's CPU blade automatically. When Remote Units operate with survival mode, this data is used.
- Data to be used by each Remote Unit is stored in the flash memory every 10 minutes. When a Remote Unit starts operating with survival mode within 10 minutes from starting up, the system does not operate normally because the data is not stored in flash memory. The system should be observed for more than 10 minutes after starting up.
- The license condition for Remote Unit in survival mode is changed so that the same number of licenses as the Main Unit can be used for a definite period of time from survival mode start. By this change of license condition, all IP terminals which were registered in the Main Unit in the normal mode can be registered to Remote Unit during the survival mode.

The functional conditions are as follows.

- This function can be provided only by applying SV9300 software.
- The Temporary License Information expires after 15 days operation in Survival mode and is deleted.
The validity of Temporary License Information can be extended up to 60 days by optional license. The temporary license Information will be also deleted once one week elapses after the CPU power is turned off.
- By using Fault Kind No. 017(set by CMEA Y=2), expiration of the license data can be notified. This is registered in the Remote Unit in survival mode at the ten days before the license expires or when the license expires.
- When the survival mode of Remote Unit starts again after the license expires, the number of available licenses is limited to the number of IP terminals that have been logging into the Unit in the normal mode.
- The license data copy from the Main Unit is executed not only at the survival mode start but also at the system data copy execution.

Conditions for Remote Unit Accommodation

- The number of Remote Units is a maximum of 46 (Unit number 05-50).
- For the system capacity of ISDN system or CCIS system, refer to the system capacity of System Hardware Manual. Set the whole Remote UNIT over IP system within the system capacity and be sure to mount the handler blade in the Unit where the interface blade is installed.
- The number of terminals/trunks accommodated at one Remote Unit should be a maximum of 288.
- Following is connected to the LAN port of the CPU blade at Main Unit.
Peer-to-Peer CCIS, OAI, PCPro
- Set the unique location number to each location group for proper setting of the VoIPDB channel selection and CODEC for voice compression (setting of Unit Location).
- The system clock at Remote Unit synchronizes with the system clock at Main Unit. If the communications to Main Unit are interrupted, Remote Unit does not synchronize and operates at the hardware clock on the CPU blade of Remote Unit.
- Remote Unit cannot accommodate the IPT (P2P CCIS)/SIP Trunk.
- A different metering area at each Remote Unit is not available because Main Unit corrects all call metering through the whole system. If a call is originated from the COT at Remote Unit, it is charged as the call originated from the COT at Main Unit.
- The services requiring continuous voice transmission such as Internal Zone Paging should not be used at Remote Unit considering the traffic on the network.
- Multiple line service should be used among different units considering the traffic on the network.
- Unavailable services at Remote Unit are as follows.
 - Attendant Console, Desk Console.
 - All services using External Equipment Interface are not available.
 - All services using VRS blade are not available.
- Station number of the stations accommodated in Remote Units should be divided with the Tenant (CM12 Y=04) according to the PSTN/GSTN or private line to be connected, or each service to be used.
- Set the unique trunk route to each Unit.
- Since Main Unit controls OAI, OAI terminals cannot be used at Remote Unit during survival mode operation.
- Each Remote Unit must provide a hold tone to the station at the Remote Unit.
 - External hold tone (using Pin Jack on the CPU blade):
Tone source connected to the other unit can be used.
 - Internal hold tone: Available
 - Hold tone using VRS: Not available
- Remote Unit can accommodate the Standard SIP Terminal. For details, refer to the System Manual.

Conditions for Survival Mode at Remote Unit

- Remote Unit starts survival mode operation in the following cases.
 - a. When the communications (Keep Alive signal) in every 30 seconds between Main Unit and Remote Unit are interrupted for the predetermined time set by CM0B Y=1XX>80 on normal mode operation.
 - b. When Remote Unit cannot be connected to Main Unit or is not allowed to connect to Main Unit after the system reset of the Remote Unit.
- Remote Unit is reset automatically to change the operation from normal mode to survival mode when it detects an interruption of the communications from/to Main Unit.
- When Remote Unit starts the survival mode operation, the fault information “System reset” (Fault occurrence kind No. 001) is registered to the CPU blade of Remote Unit. In addition, “Communication error occurrence between Main Unit and Remote Unit” (Fault occurrence kind No. 042) is registered to the CPU blade of Main Unit at 20 seconds later from the predetermined time set by CM0B Y=1XX>80.
- Remote Unit on survival mode checks at every 30 seconds if the communications to Main Unit are possible. When the Remote Unit regards that the communications are possible, “Communication error restoration between Main Unit and Remote Unit” (Fault occurrence kind No. 052) is registered to the CPU blade of Main Unit at 20 seconds later from the predetermined time set by CM0B Y=1XX>81.
- When Remote Unit on survival mode regards that the communications to Main Unit are possible, manual changeover (system reset) is required. Automatic changeover (re-connection to Main Unit) is also selectable in system data programming (CM0B Y=1XX>81, 83). At the automatic changeover, Remote Unit system is initialized and the calls on going are disconnected due to the reset of terminals.
- During survival mode operation, it is not possible to originate/terminate calls to/from stations at other units.
- When PCPro is connected to Unit02-50 during a survival mode, by entering the system data (CMFA Y=05) on the System Data mode of PCPro, you can read only the information of IP Station logged in to the Unit. When PCPro is connected to Unit02-50 during a normal mode, the information for IP Station cannot be read (“CM CODE NOT ALLOWED” is displayed when you enter the first data).
 - * The reading connecting Unit No. for IP Station is available only for IP Multiline Terminal/DT700/DT800 Series/Standard SIP station/D^{term}SP30/SP350/MH240.

Maintenance Conditions

- You can connect PCPro to Remote Unit via RS-232C or LAN.
- Do not set and change the system data at Remote Unit, except setting the Unit number for Remote Unit by CM0B Y=000>90. If the system data is set and changed at Remote Unit, normal operation is not guaranteed. In addition, the system data copy from Main Unit overwrites the system data in Remote Unit once a day.
- SNMP is not available at Remote Unit.
- System Upgrade is available via RS-232C at each unit.
- Remote Unit does not have DHCP server and client function.
- The MJ/MN alarm indications are not available at Remote Unit.

If a fault occurs at Remote Unit, the fault is notified to the Main Unit and MJ/MN alarm is indicated at the Main Unit.

- On-line expansion for LC/DLC/COT blades is supported and it enables the tone/path connection even if the system data copy is not activated to the Remote Unit. After completing all expansions for LC/DLC/COT blades, be sure to execute the system data copy to the Remote Unit (CMEC Y=8). Note that the expanded data will not be added if the Remote Unit starts survival mode operation before the system data copy.

Conditions for Link Down Notice

- Link Down Notice is available only for Multiline Terminal and IP Station accommodated in SV9300. This is not available for a single line telephone and Attendant Console.
- For message display, Multiline Terminal with 24-digit or more LCD is recommended. 16-digit LCD may not display all messages properly.
- Notification message can be displayed regardless of idle or busy state of Multiline Terminal, writing the message over the present display. After six seconds, the display returns to the time display automatically.
- The system detects a Link Down on the condition that UDP connection between Main Unit and Remote Unit is interrupted. The Link Down is notified to the Multiline Terminal after a lapse of the time set by CM0B Y=1XX>82.

- When the link between Main Unit and Remote Unit is interrupted, the lamp of Multiline Terminal button becomes the state as shown below. Then press the button, the LCD of the Multiline Terminal displays the following.

COLOR AND STATE OF BUTTON		STATE AND OPERATION	LCD DISPLAY
Red/Flashing (Momentarily)	0.125 seconds ON- 0.125 seconds OFF	Link Down occurrence	-
Red/Flashing (Slowly)	0.5 seconds ON- 0.5 seconds OFF	Press the button after Link Down occurrence	Link Down to UNIT: xx (xx: Unit No.)
Green/Flashing (Intermittently)	0.125 seconds ON- 0.125 seconds OFF- 0.125 seconds ON- 0.625 seconds OFF	Remote Unit is survival mode after Link restoration	-
Green/Flashing (Intermittently)	0.125 seconds ON- 0.125 seconds OFF- 0.125 seconds ON- 0.625 seconds OFF	Press the button with Remote Unit is survival mode after Link restoration	Link Ready to Restore: xx (xx: Unit No.)
OFF	-	Remote Unit is normal mode after Link restoration	-
OFF	-	Press the button with Remote Unit is normal mode after Link restoration	Normal Condition: UNIT

- Link restoration is notified to the Multiline Terminal after a lapse of the time set by CM0B Y=1XX> 81. After the link is ready, the lamp of Multiline Terminal button keeps flashing during the Remote Unit operates on survival mode. Since the color of lamp and the indication interval changes, an administrator at the Remote Office can changeover the system operation from survival mode to normal remote mode according to this indication. When the link between Main Unit and Remote Unit recovers and the Remote Unit starts subordinate operation to the Main Unit (normal mode), the flashing lamp of the button goes out.

Conditions for User Mobility

- This service is available when only an IP Station user moves to the visitor unit and uses the IP Station that is established there, or an IP Station user and IP Station move to the visitor unit.
- This service can be used for only IP Station.
- IP Station users of this service can move to a Remote Unit from the Main Unit, from the Main Unit to Remote Units, or between Remote Units. Furthermore, they can move from a visitor unit to another unit.
- This service is available for only the IP Station registered with Protected Login Mode. It cannot be used for the IP Station registered with Automatic Login Mode.
- In the visitor unit also, an IP license for each IP Station operated (one port per unit) is required.
- The table below shows the maximum number of IP Station and virtual stations for visitor in the Main Unit/Remote Units.

Main Unit/ Remote Unit	IP Station/ Virtual station for visitor	Maximum number of stations	Total
Main Unit	IP Station	1024	1536
	Virtual station for visitor		
Remote Unit	IP Station	1024	
	Virtual station for visitor		

- If an IP Station user and IP Station move to a visitor unit, manually set the address of the visitor unit in advance to primary/secondary DRS with the IP Station or, after moving to the visitor unit, change the setting of the primary DRS to the address of the visitor unit. You cannot automatically change this setting with SV9300 (auto-setting is possible if using a DHCP server).
Also, after moving to the visitor unit, change the IP address, subnet mask, and default gateway.
For the way of setting with IP Station, refer to “IP Station SETUP” in the System Manual.
- Even if you execute the system data backup/system data copying after moving to a visitor unit, when the system is initialized, the settings of the IP Station revert to the settings used before moving. In that case, do the login operation again (enter station number/password). For the login operation, refer to “IP Station LOGIN/LOGOUT OPERATION” in the System Manual.
- Visitor stations can be operated even at a Remote Unit that changes from a normal mode to a survival mode due to a network failure, etc. In this case, do the login operation again.
- When changing/deleting the data of CM10 Y=01 while IP Station logs into the visitor unit, “WAIT, BUSY NOW” is displayed. Change/delete the data of CM10 Y=01 after doing the logout operation with the IP Station or clearing the MAC Address by CM12 Y=90.

- If only an IP Station user moves to a visitor unit without doing the logout operation, the user can log into a visitor unit in which the second data of CM08>516 is set to 0 (To override). If the second data is set to 1 (Not overridden), “Double Assignment” is displayed, and login to the visitor unit is restricted.
- If you set Call Forwarding-Logout when moving to another unit, calls can be forwarded to the destination (station/outside party/Attendant Console). However, if only an IP Station user moves to the visitor unit, you must do the logout operation to enable Call Forwarding-Logout.

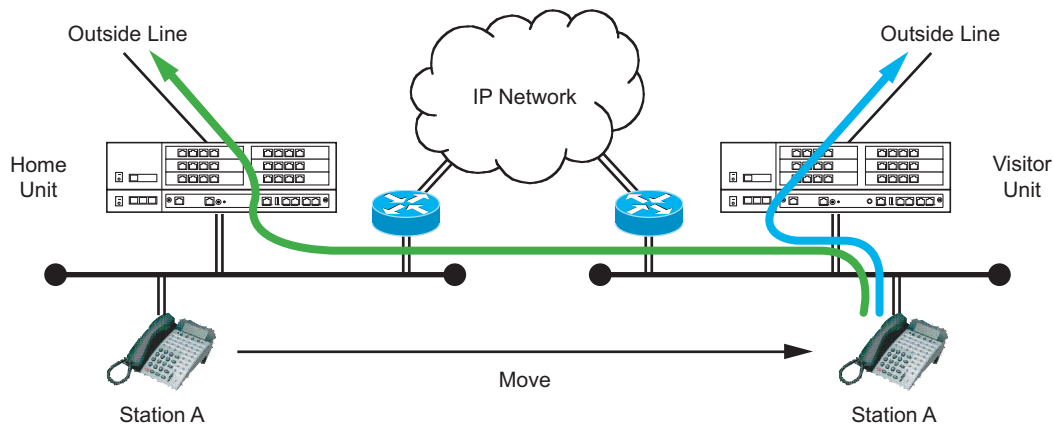
For Call Forwarding-Logout, refer to “Call Forwarding-Logout (IP Station)” in the System Manual. The table below shows the call forwarding available/unavailable when moving to another unit according to the IP Station moving condition.

IP Station Moving Condition	Call Forwarding	
	When the Destination of Call Forwarding-Logout is set	When the Destination of Call Forwarding-Logout is not set
Moving to Visitor Unit	Available	Depends on CM15 Y=481 NOTE
Logging in at Visitor Unit	Available	
Logged in at Visitor Unit	Unavailable	Depends on CM15 Y=481 NOTE
Moving to Home Unit	Available	Depends on CM15 Y=481 NOTE
Logging in at Home Unit	Available	
Logged in at Home Unit	Unavailable	Depends on CM15 Y=481 NOTE

NOTE: By setting CM15 Y=481, you can select ROT sending, RBT sending, or forwarding to Voice Response System.

- For the visitor station in the visitor unit, the location number set by CM0B Y=1XX>10 is effective, even if the location number has been set by CM12 Y=39/50.
- For the visitor station in the visitor unit, the tenant number set by CM0B Y=1XX>11 is effective, even if the tenant number has been set by CM12 Y=04.
- After moving to a Remote Unit, the IP Station operates according to the conditions of the Remote Unit.
- The last number redial and stack dial data of IP Station is lost when moving to another unit.
- If only an IP Station user moves to a visitor unit, you cannot use this service with setting of Line/Trunk Feature Key (number of keys originally provided with IP Station, and data setting of 16/24 Line/Trunk Feature keys) differing between the home unit and visitor unit.
For example, if you use D^{term}85 (Series i) with IP adapter (16 Line/Trunk Feature keys + 16 One Touch keys) at the home unit, you cannot use Soft Phone (24 Line/Trunk Feature keys + 8 One Touch keys) at a visitor unit.

- When IP Station is logged in to the destination unit (visitor unit), you can make an outgoing call using the trunk route of home unit or visitor unit (set by CM15 Y=196).



Operating Procedure for User Mobility

■ When an IP Station user and IP Station move to a visitor unit

- Log out with the logout operation.
- Move to the visitor unit.
- Manually change the primary DRS address, IP address, subnet mask, and default gateway address with the IP Station, or automatically set them with the DHCP server. **NOTE**
- Do the login operation (enter station number, password).
You can log into the visitor unit.

■ When only an IP Station user moves to a visitor unit

- Log out with the logout operation.
- Move to the visitor unit.
- Do the login operation (enter station number, password) at the visitor unit with an IP Station that is not logged in.
You can log into the visitor unit.

NOTE: For the primary address, set the IP address of CPU blade of the destination unit.

■ **When an IP Station user and IP Station move to a visitor unit without doing the logout operation**

1. Without doing the logout operation, move to a visitor unit.
After 1-2 minutes from IP Station power off or cable disconnection, you are logged out.
2. Manually change the primary DRS address, IP address, subnet mask, and default gateway address with the IP Station, or automatically set them with the DHCP server. **NOTE 1**
3. Do the login operation (enter station number, password).
You can log into the visitor unit.

■ **When only an IP Station user moves to a visitor unit without doing the logout operation**

NOTE 2

1. Without doing the logout operation, move to a visitor unit.
2. Do the login operation (enter station number, password) at the visitor unit with an IP Station that is not logged in.
“Override?” is displayed on the LCD of the IP Station.
3. Press the **Yes** key.
The IP Station at the original unit is logged out.
You can log into the visitor unit.

■ **When an IP Station user and IP Station move to a visitor unit, and then return to the home unit**

1. Log out with the logout operation.
2. Move to the home unit.
3. Manually change the primary DRS address, IP address, subnet mask, and default gateway address with the IP Station, or automatically set them with the DHCP server. **NOTE 3**
4. Do the login operation (enter station number, password).
You can log into the home unit.

■ **When only an IP Station user moves to a visitor unit, and then returns to the home unit**

1. Log out with the logout operation.
2. Move to the home unit.
3. Do the login operation (enter station number, password) with your own IP Station at the home unit.
You can log into the home unit.

NOTE 1: For the primary address, set the IP address of CPU blade of the destination unit.

NOTE 2: At the destination unit, the second data of CM08>516 must be set to 0.

NOTE 3: For the primary address, set the IP address of CPU blade of the destination unit.

■ **When an IP Station user and IP Station move to a visitor unit, and then return to the home unit without doing the logout operation**

1. Without doing the logout operation, move to the home unit.
After 1-2 minutes from IP Station power off or cable disconnection, you are logged out.
2. Manually change the primary DRS address, IP address, subnet mask, and default gateway address with the IP Station, or automatically set them with the DHCP server. **NOTE 1**
3. Do the login operation (enter station number, password).
You can log into the home unit.

■ **When only an IP Station user moves to a visitor unit, and then returns to the home unit without doing the logout operation **NOTE 2****

1. Without doing the logout operation, move to the home unit.
2. Do the login operation (enter station number, password) with your own IP Station at the home unit.
“Override?” is displayed on the LCD of the IP Station.
3. Press the **Yes** key.
The IP Station at the visitor unit is logged out.
You can log into the home unit.

NOTE 1: *For the primary address, set the IP address of CPU blade of the destination unit.*

NOTE 2: *At the destination unit, the second data of CM08>516 must be set to 0.*

Conditions for ISDN Alternative Routing in Remote Unit Survival Mode


- This service is available only when the ISDN trunk is accommodated in the unit where this service is used. Both the Basic Rate Interface (BRI) and the Primary Rate Interface (PRI) can be used.
- This service is available only when the tenant is assigned in each unit.
- When the unit in survival mode returns to normal mode while an ISDN Alternative Routing connection is established, the call is disconnected.
- The table below shows the operational availability of ISDN Alternative Routing by terminal combination of originating and terminated side.

×: Available –: Not available

Terminated Side Originating Side	Multiline Terminal, SLT	DESKCON, ISDN telephone, Virtual station
Multiline Terminal, SLT	×	–
Virtual station (Sub-line origination)	×	–
DID trunk	×	–
Ring down	×	–
DESKCON	–	–
ISDN telephone	–	–

- This service is available between the Remote Unit and the Main Unit, and between Remote Unit and Remote Unit.
- There are following conditions to perform this service.
 - When a call is originated from a station to a station within own office (VM is included in a station within own office)
 - When a station places a call on hold and originates a call to another station
 - When a call terminates from DID trunk to a station
- This service is not available when the destination is a virtual station, a station in another office, a network station, or with trunk origination via other units.
- This service is available when the destination is trunk termination via other units.
- This service is performed when the unit of the originating station is in survival mode, or when the unit of the terminated station is in survival mode. Even if the communication between the Main Unit and the Remote Unit is unavailable, this service is not performed until the mode returns to survival mode.
- Only the ISDN trunk origination is supported for this service. As transmission methods, route origination, route advance, and LCR are available.
- Trunk access code must be assigned for each originating tenant by CM64 Y=11. The trunk to be hunt by the assigned access code specifies trunk in own office.

- When the entire ISDN trunks are busy, the originating party receives ROT.
- Only the ISDN trunk can be set as the destination of ISDN Alternative Routing.
- You can count the number of the origination of ISDN Alternative Routing by CMB0 Y=0>088.
- The origination trunk is selected as follows.
 - When a call originated from a station to other station: depends on the tenant setting of the originated station
 - When a call originated from a trunk to other station : depends on the tenant setting of the terminating trunk
- The area code restriction and call charge on an origination of ISDN Alternative Routing are performed in the terminating station. However, charging for the Remote Unit in survival mode is not possible.
- ISDN CPN (Calling Party Number) of ISDN Alternative Routing is as follows.
 - When a call originated from a station to other station: sends the calling party number of the originated station
 - When a call originated from a trunk to other station : sends the calling party number of the terminating station
 - Priority of ISDN CPN (Calling Party Number) is as follows.

ISDN CPN (Calling Party Number) Programming	Sent Calling Party Number	Priority
CM12 Y=12, 13/CM50 Y=05 ISDN subscriber number	Calling Party number of station	High  Low
CM30 Y=19, 34/CM50 Y=05 ISDN subscriber number	Calling Party number of trunk	
No data	Not sent	

- This service is available with the features as follows:
 - Last Number Call (Last Number Redial)
 - Stack Dial
 - One Touch Key
 - System Speed Dialing/Station Speed Dialing
 - Dial By Name
 - Message Reminder
 - Voice Mail Key
 - Hotline/Delayed Hot Line

- Destination number assigned for ISDN Alternative Routing by CM64 Y=12 as follows.
 - (a) Destination number setting for each station
 - DID number setting is required to each destination station.
 - Destination number of each station is assigned by CME6 Y=51. When Mobile Access is operating in the system, a call terminates to a Mobile phone via C.O. line because this data is shared with Mobile Access destination number.
 - If system data of destination number of each station is not copied to origination station unit, ISDN Alternative Routing is not performed.
 - Virtual station is not appropriate for the destination station.
 - (b) Destination number setting for each tenant
 - DID number setting is required to each tenant of destination station.
 - Destination number of each tenant is assigned by CM64 Y=13.
 - If system data of destination number of each tenant is not copied to origination station unit, ISDN Alternative Routing is not performed.
 - (c) Destination number setting for each tenant and Subaddress
 - DID number setting to each tenant of the destination station and called party subaddress setting to each station as the station number are required. The operation of the trunk of destination depends on the setting of destination subaddress assigned by CM08>401.
 - ISDN network in which called party subaddress is available is required.
 - Destination number of each called party subaddress is assigned by CM64 Y=13. Also whether or not to use the called party subaddress is assigned for each tenant of destination.
 - If system data of destination number of each tenant is not copied to origination station unit, ISDN Alternative Routing is not performed.

- The priority of this service and other services are as follows. When Mobility Access is operating parallel, the priority depends on CM15 Y=484.

◀: Default

PRIORITY	CM15 Y=484	
	2ND DATA=0	2ND DATA=3◀
<div><div>HIGH</div><div><div></div></div><div>LOW</div></div>	Restriction of Inter-tenant Connection	Restriction of Inter-tenant Connection
	Call Forwarding-All Calls/Split Call Forwarding-All Calls	Call Forwarding-All Calls of Mobility Access
	Call Forwarding-All Calls of Mobility Access	Alternative ISDN Connection when Remote Unit in survival mode (CID Call Routing per each station)
	Alternative ISDN Connection when Remote Unit in survival mode (CID Call Routing per each station)	Alternative ISDN Connection when Remote Unit in survival mode (CID Call Routing per each tenant)
	Alternative ISDN Connection when Remote Unit in survival mode (CID Call Routing per each tenant)	Call Forwarding-Logout (IP Station)
	Call Forwarding-Logout (IP Station)	Call Forwarding-All Calls/Split Call Forwarding-All Calls
	Do Not Disturb/Return Message Schedule Display	Do Not Disturb/Return Message Schedule Display
	UCD (Uniform Call Distribution)	UCD (Uniform Call Distribution)
	Station Hunting	Station Hunting
	Call Forwarding-Busy Line/Split Call Forwarding-Busy Line	Call Forwarding-Busy Line/Split Call Forwarding-Busy Line

- The features with lower priority than ISDN Alternative Routing are performed in the unit after trunk termination by ISDN Alternative Routing.
- Even if the transfer destination of each tenant for DID call assigned by (CM51) is in survival mode, ISDN Alternative Routing is available.
- When the calling party is in Main Unit, the origination is charged as a normal trunk origination. When the calling party is in Remote Unit, the call charge is not performed.
- The number of the origination is counted only in Main Unit.

SYSTEM SETUP

(1) Procedure of Reset Operation

STEP1: Assign all required system data to the CPU blade of Main Unit, including the required data for Remote Unit.

STEP2: Load all License Activation data to the Main Unit.
For details, refer to License Activation Operation Guide. **[For other than North America]**

STEP3: Execute the system data backup to the Flash ROM of CPU blade by CMEC Y=6>0: 0.

STEP4: Save the system data of Main Unit by PCPro.

STEP5: Set the SENSE switch of #0 CPU to “E” (Off-line), and push the RESET switch of #0 CPU.

STEP6: Clear the system memory of Remote Unit by CM00>1.

STEP7: Load the system data saved in STEP4 to all Remote Units using PCPro.

STEP8: Assign the Unit numbers for Remote Unit to each CPU blade of Remote Units by CM0B Y=000>90.  [Page 3-41](#)

STEP9: Set the SENSE switch of #0 CPU to “1” (on-line), and push the RESET switch of #0 CPU.

STEP10: Confirm that the link between Main Unit and Remote Unit is established.

If not, connect the Main Unit and Remote Unit by LAN.

– The required system data is copied to each Remote Unit from the Main Unit, and Remote Units starts.

(2) Procedure for an Additional Remote Unit Installation

STEP1: Assign all required system data to the CPU blade of Main Unit, including the required data for Remote Unit.


STEP2: Load all License Activation data to the Main Unit.
For details, refer to License Activation Operation Guide. **[For other than North America]**

STEP3: Execute the system data backup to the Flash ROM of CPU blade by CMEC Y=6>0: 0.

STEP4: Set the SENSE switch of #0 CPU to “E” (Off-line), and push the RESET switch of #0 CPU.

STEP5: Clear the system memory of Remote Unit by CM00>1.

STEP6: Assign the IP address of Main Unit and own IP address to the CPU blade of Remote Unit to be additionally installed.

STEP7: Assign own Unit number to the CPU blade of Remote Unit to be additionally installed by CM0B Y=000>90  [Page 3-41](#)

STEP8: Execute the system data backup to the Flash ROM of CPU blade of Remote Unit.

STEP9: Set the SENSE switch of #0 CPU to “1” (on-line), and push the RESET switch of #0 CPU.

STEP10: Confirm that the link between Main Unit and Remote Unit is established.

If not, connect the Main Unit and Remote Unit by LAN.

- The required system data is copied to the Remote Unit from the Main Unit. It takes 3-4 minutes to copy the system data from the Main Unit to the Remote Unit.
- The Remote Unit starts.

PROGRAMMING PROCEDURE

For the Remote UNIT over IP data, there are three types of system data as shown below.
Program the system data according to each of programming procedure.

- System data set to the CPU blade of Main Unit
 - (1) Data for Main Unit Operation
 - (2) Data for Remote Unit Operation
- System data set to the CPU blade of Remote Unit
- System data set to the CPU blades both of Main Unit and Remote Unit **NOTE**
 - (1) VoIPDB Data

NOTE: *LAN Data for Main Unit and Remote Unit must be set to the CPU blades both of Main Unit and Remote Unit when an additional Remote Unit is installed.*

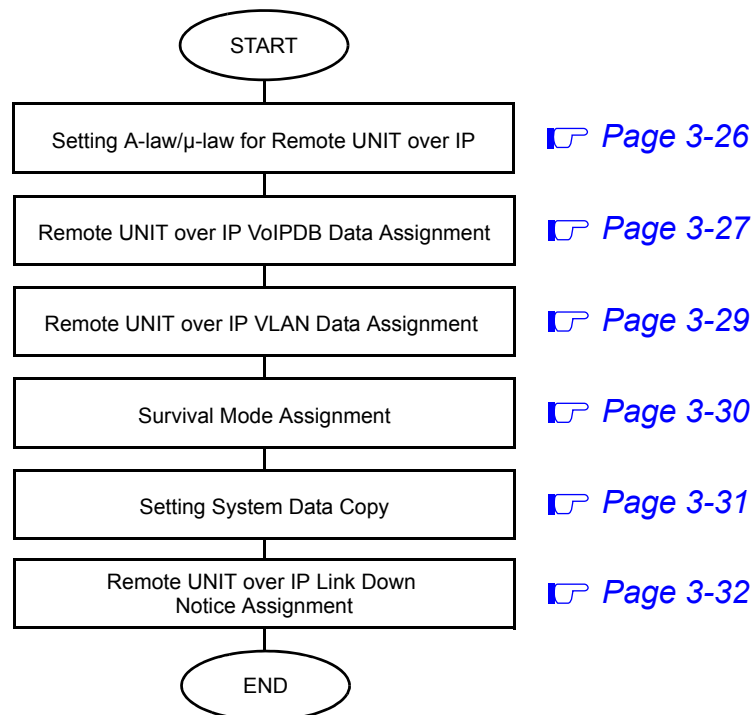
(1) Programming Procedure to Main Unit

Program the system data to the CPU blade of Main Unit according to the following procedure.

Before the system data setting, confirm the following contents.

- (a) Remote UNIT over IP system (Number of Remote Unit, IP network etc.)
- (b) IP address of the Main Unit and Remote Unit

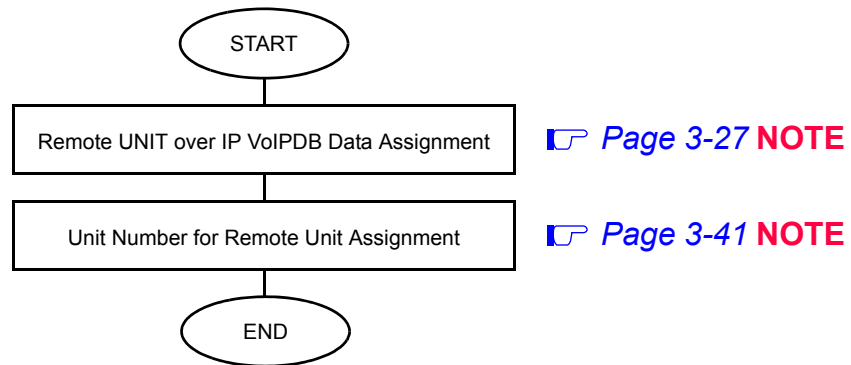
Programming Procedure to Main Unit



(2) Programming Procedure to Remote Unit

Program the system data to each CPU blade of Remote Units according to the following procedure.

Programming Procedure to Remote Unit



NOTE: Set this data to the CPU blade of Remote Unit only when an additional Remote Unit is installed.

SETTING A-LAW/ μ -LAW FOR REMOTE UNIT OVER IP

- (1) Setting A-law/ μ -law for Main Unit
See “Setting A-law/ μ -law” in the System Manual.
- (2) Setting A-law/ μ -law for Remote Unit
[For EMEA]

START	DESCRIPTION	DATA
<div>CM04</div>	<div>Specify the A-law/μ-law for the Main Unit/ Remote Unit.</div> <div>NOTE: <i>Set the same value as Main Unit (CM04 Y=10-13). You cannot set both of A-law and μ-law in the same Remote UNIT over IP system.</i></div>	<div><ul style="list-style-type: none">Y=10-59 (Remote Unit01-50)</div> <div>(1) 00</div> <div>(2) 0 : A-law 1 : μ-law 2 : Not used 3◀: Depends on the CPU</div>
END		

REMOTE UNIT OVER IP VoIPDB DATA ASSIGNMENT

START	DESCRIPTION	DATA
<div>CM0B</div> <div>A</div>	Assign the IP address for the VoIPDB. <div>RESET</div> <p>NOTE: The second data must be entered including the periods (.).</p>	<ul style="list-style-type: none"> Y=1XX (VOIP Port [1] + Unit No. [02-50]) (1) 00: IP Address (2) XXX.XXX.XXX.XXX: 0.0.0.1-255.255.255.254: IP Address (Maximum 15 digits) NONE◀: No data
	Assign the Subnet Mask for the VoIPDB. <div>RESET</div> <p>NOTE: The second data must be entered including the periods (.).</p>	<ul style="list-style-type: none"> Y=1XX (VOIP Port [1] + Unit No. [02-50]) (1) 01 (2) XXX.XXX.XXX.XXX: 255.0.0.0-255.255.255.252: Subnet Mask (Maximum 15 digits) NONE◀: No data
	Assign the Default Gateway Address for the VoIPDB. <div>RESET</div> <p>NOTE 1: The second data must be entered including the periods (.).</p> <p>NOTE 2: Only one Default Gateway Address can be set for the system.</p>	<ul style="list-style-type: none"> Y=1XX (VOIP Port [1] + Unit No. [02-50]) (1) 02 (2) XXX.XXX.XXX.XXX: 0.0.0.1-255.255.255.254: Default Gateway Address (Maximum 15 digits) NONE◀: No data
	Assign the IP address (RTP) for the VoIPDB. <div>RESET</div> <p>NOTE: The second data must be entered including the periods (.).</p>	<ul style="list-style-type: none"> Y=2XX (VOIP Port [2] + Unit No. [02-50]) (1) 00: IP Address (2) XXX.XXX.XXX.XXX: 0.0.0.1-255.255.255.254: IP Address (Maximum 15 digits) NONE◀: No data

A	DESCRIPTION	DATA
CM0B	Assign the common port number of Device Handler Manager (DHM) Self port which is the communication port between the Main Unit and Remote Units, if required.	<ul style="list-style-type: none"> Y=1XX (VOIP Port [1] + Unit No. [02-50]) (1) 40 (2) 01024-65534: DHM Self Port No. 1024-65534 NONE◀ : 3300 [3300-3401 (102 ports are used)]
	RESET	
	NOTE 1: Follow the default data setting usually.	
	<p>NOTE 2: The DHM self port is the communication port between Main Unit and Remote Unit. One port is used to communicate with one Remote Unit. With this command, the common port of DHM self port is specified. And the following DHM self port is automatically assigned to each Remote Unit.</p> <p>Port No. for each Remote Unit =Common Port (Setting Data) + Remote Unit No.</p> <p>And, set the port number that is not used by other purposes.</p>	
	Assign the communication mode and the communication speed for the LAN Interface of the CPU blade in the Remote Unit.	<ul style="list-style-type: none"> Y=1XX (VOIP Port [1] + Unit No. [02-50]) (1) 09 (2) 02 : 100 Mbps (Full-Duplex) 03 : 100 Mbps (Half-Duplex) 04 : 10 Mbps (Full-Duplex) 05 : 10 Mbps (Half-Duplex) 15◀: Auto Negotiation (GbE)
	RESET	
	NOTE 1: Assign the communication mode and the communication speed of the LAN Interface before you connect to the Main Unit.	
	NOTE 2: Be sure to assign the communication mode and the communication speed of the LAN Interface for the CPU blade in the Main Unit.	
END		

REMOTE UNIT OVER IP VLAN DATA ASSIGNMENT

- (1) VLAN Data Assignment for Main Unit
See “VLAN Data Assignment” in the System Manual.
- (2) VLAN Data Assignment for Remote Unit

START	DESCRIPTION	DATA
<div>CM0B</div>	Provide the VLAN with the Remote Unit. <div>RESET</div>	<ul style="list-style-type: none"> Y=1XX (VOIP Port [1] + Unit No. [02-50]) <p>(1) 50 (2) 0: To provide</p>
	<p>NOTE: Assign the IP Address and the Subnet Mask that have been set by CM0B Y=0XX/1XX>00, 01.</p> <p>Specify the priority of the VLANS. <div>RESET</div></p>	<ul style="list-style-type: none"> Y=1XX (VOIP Port [1] + Unit No. [02-50]) <p>(1) 51 (2) 0-7◀: Priority 0-7 NOTE</p>
	Assign the VLAN ID to the Remote Unit. <div>RESET</div>	<ul style="list-style-type: none"> Y=1XX (VOIP Port [1] + Unit No. [02-50]) <p>(1) 52 (2) 1-4094 : VLAN ID 1-4094 NOTE 2 NONE◀: No data</p>
	<p>NOTE 1: One VLAN ID can be set per system.</p>	
	<p>NOTE 2: VLAN ID 0 is not available.</p>	
END		

SURVIVAL MODE ASSIGNMENT

START	DESCRIPTION	DATA
CM0B	Specify the start time for the automatic changeover to survival mode from normal mode after the disconnection between the Main Unit and Remote Unit is detected.	<ul style="list-style-type: none"> Y=1XX (VOIP Port [1] + Unit No. [02-50]) (1) 80 (2) 00 : Not notify the link down 01 : 0-6 seconds (Unit02-04) 0-30 seconds (Unit05-50) 99 : 588-594 seconds (Unit02-04) 2940-2970 seconds (Unit05-50) (6 seconds increments [Unit02-04]/30 seconds increments [Unit05-50]) NONE◀: 12-18 seconds (Unit02-04) 60-90 seconds (Unit05-50)
	Provide the system with the automatic changeover to normal mode from survival mode after the connection between the Main Unit and Remote Unit returned to normal condition.	<ul style="list-style-type: none"> Y=1XX (VOIP Port [1] + Unit No. [01-50]) (1) 83 (2) 0: To provide
	Specify the start time for the automatic changeover to normal mode from survival mode after the connection between the Main Unit and Remote Unit returned to normal condition.	<ul style="list-style-type: none"> Y=1XX (VOIP Port [1] + Unit No. [02-50]) (1) 81 (2) 00 : Not execute the automatic changeover to normal mode 01-99: 0-2970 seconds (30 second increments) If no data is set, the default setting is 90-120 seconds.
END		

SETTING SYSTEM DATA COPY

- (1) To copy the system data from the Main Unit to Remote Units automatically once a day;

START	DESCRIPTION	DATA
CM43	Assign the start time for copying the system data from the Main Unit to Remote Units. NOTE 1: <i>The state of automatic system data copy can be read by CMEC Y=8.</i> NOTE 2: <i>System data copy is executed from the low Remote Unit number to high Remote Unit number.</i> NOTE 3: <i>The start time for system data copy may gain/loss about three minutes from the time you set.</i>	<ul style="list-style-type: none"> Y=7 (1) 00 (2) HH MM HH : 00-23 (Hour) MM : 00-59 (Minute) 9999 : Not copy the system data automatically NONE◀: 0200 (2:00 a.m.)
END		

- (2) To copy the system data from the Main Unit to Remote Units manually/To read the state of system data copy;

START	DESCRIPTION	DATA
CMEC	Specify the unit number that is executed the system data copy /read the state of system data copy. NOTE: <i>You can assign only "0" to the second data. "1" is displayed in the second data while the system data being copied.</i>	<ul style="list-style-type: none"> Y=8 (1) 00 : All Remote Units 02-50: Remote Unit02-50 (2) 0 : Start System Data Copy 1 : Now copying/System data copy state can be read 3◀: Stand by/System data copy state can be read
END		

REMOTE UNIT OVER IP LINK DOWN NOTICE ASSIGNMENT

When the Main Unit and Remote Unit are disconnected due to a fault occurrence, the link down can be notified to the Multiline Terminals that are connected to both units.

To provide the link down notice with the Multiline Terminals, in addition to the programming of “Survival Mode Assignment”, do the following programming.

START	DESCRIPTION	DATA
CM90	Assign the Event Occurrence Notice button to the Multiline Terminals. NOTE: Assign this data only to the station number of the Multiline Terminal that the link down is notified.	<ul style="list-style-type: none"> Y=00 (1) My Line No. + <input type="text"/> + Key No. (2) F1600-F1663: Event Occurrence Notice button No. 01-64 NONE◀: No data
CM0B	Specify the start time to notify the link down to the Multiline Terminal after the disconnection between Main Unit and Remote Unit is detected. <div>RESET</div> NOTE: Assign the shorter time than the time for automatic changeover to survival mode assigned by CM0B Y=1XX>80. If the longer time is set, the link down cannot be notified.	<ul style="list-style-type: none"> Y=1XX (VOIP Port [1] + Unit No. [02-50]) (1) 82 (2) 00 : Not notify the link down 01 : 0-6 seconds (Unit02-04) 0-30 seconds (Unit05-50) ? 99 : 588-594 seconds (Unit02-04) 2940-2970 seconds (Unit05-50) (6 seconds increments [Unit02-04]/30 seconds increments [Unit05-50]) NONE◀: 0-6 seconds (Unit02-04) 0-30 seconds (Unit05-50)
CM9B	Assign the link down notice for the UNIT (except Main Unit) to the Event Occurrence Notice button.	<ul style="list-style-type: none"> Y=0 (1) XX ZZ XX: 01-64: Event Occurrence Notice button No. ZZ : 02-50: Unit No. to be notified (except Main Unit) (2) 0 : To notify 1◀: Not notified
END		

TIME ZONE/DAYLIGHT SAVING TIME DATA ASSIGNMENT

To enable remote connection of stations regardless of nation and area with multiple time zone, do the following programming.

START

DESCRIPTION

DATA

CM0B

Assign the Location number to each Unit.

- Y=1XX (VOIP Port [1] + Unit No. [02-50])

(1) 10

(2) 00-63 : Location No. 00-63

NONE◀: Location No. 00

NOTE 1: This data is available when location number is not assigned by CM12 Y=39, 50.

NOTE 2: When standard SIP terminal is accommodated, assign location number for VoIPDB by this command.

CM67

Assign the Time Zone to the location number assigned by CM0B Y=1XX>10.

- Y=10

(1) 00-63: Location No. 00-63

(2) Time Zone (See the table below)

NONE◀: No Time Zone

+15 minute increments

2nd Data	Time Zone
A2345	System Clock +23:45
A2330	System Clock +23:30
A2315	System Clock +23:15
A2300	System Clock +23:00
}	}
A0100	System Clock +01:00
A0045	System Clock +00:45
A0030	System Clock +00:30
A0015	System Clock +00:15
NONE◀	No Time Zone (No time difference)

-15 minute increments

2nd Data	Time Zone
B0015	System Clock -00:15
B0030	System Clock -00:30
B0045	System Clock -00:45
B0100	System Clock -01:00
}	}
B2300	System Clock -23:00
B2315	System Clock -23:15
B2330	System Clock -23:30
B2345	System Clock -23:45
CCC	Time Zone data clear

NOTE 1: System clock should be assigned by CM02.

NOTE 2: After changing the data, system data copying to Remote Unit by CMEC Y=8 is required.

A

A	DESCRIPTION	DATA
CM67	<p>Assign the Daylight Saving Time to the location number assigned by CM0B Y=1XX>10.</p> <p>NOTE: <i>After changing the data, system data copy to Remote Unit by CMEC Y=8 is required.</i></p>	<ul style="list-style-type: none"> • Y=30 (1) 00-63: Location No. 00-63 (2) 0 : To operate with Daylight Saving Time (+1 hour) NONE◀: To operate with Standard Time
<u>END</u>		

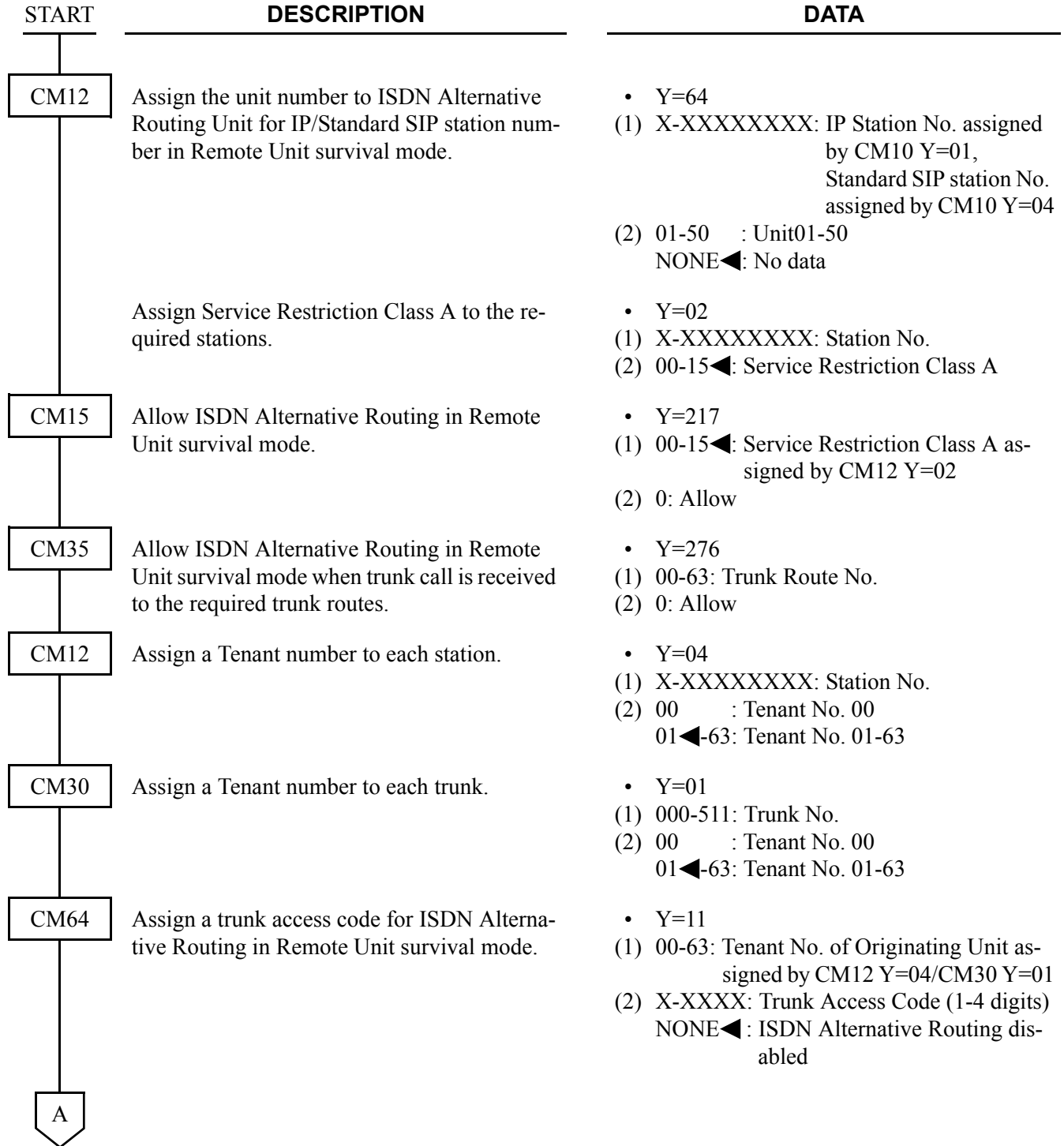
USER MOBILITY ASSIGNMENT

To make an outgoing call when IP Station logged in to the destination unit (visitor unit), do the following programming.

START	DESCRIPTION	DATA
CM12	Assign the unit number of the original unit (home unit) of IP Station.	<ul style="list-style-type: none"> Y=64 (1) X-XXXXXXXX: IP Station No. assigned by CM10 Y=01 (2) 01-50: Unit01-50
	Assign Service Restriction Class C to each station.	<ul style="list-style-type: none"> Y=07 (1) X-XXXXXXXX: Station No. (2) XX: 00-15◀: Service Restriction Class C
CM15	Specify the tenant for outgoing call trunk route choice when IP Station log in to the destination unit (visitor unit).	<ul style="list-style-type: none"> Y=196 (1) 00-15 (2) 0 : Tenant of the visitor unit to which IP Station logged in (CM0B Y=1XX>11) 1◀: Station tenant (CM12 Y=04)
	NOTE: Set the second data 0 when making an outgoing call using the trunk route of destination unit (visitor unit). Also, set the second data 1 when making an outgoing call using the trunk route of original unit (home unit).	
CM0B	Assign the tenant number for IP Station accommodated in the Unit when IP Station log in to the destination unit (visitor unit).	<ul style="list-style-type: none"> Y=1XX (VOIP Port [1] + Unit No. [01-50]) (1) 11 (2) 00-63: Tenant No. 00-63 01◀: Tenant No. 01
	NOTE: This data is effective when the second data of CM15 Y=196 is set to 0.	
CM12	Assign the tenant number to each station when IP Station log in to the destination unit (visitor unit).	<ul style="list-style-type: none"> Y=04 (1) X-XXXXXXXX: Station No. (2) 00 : Tenant No. 00 01◀-63: Tenant No. 01-63
	NOTE: This data is effective when the second data of CM15 Y=196 is set to 1.	
A		

A	DESCRIPTION	DATA
CM20	Assign the access code for LCR Group 0-3.	<ul style="list-style-type: none"> Y=0-3 Numbering Plan Group 0-3 (1) X-XXXX: Access Code (2) A126: LCR Group 0 A127: LCR Group 1 A128: LCR Group 2 A129: LCR Group 3
CM8A	Assign an Area Code Development Pattern number to each LCR Group.	<ul style="list-style-type: none"> Y=A000 (1) 0-3: LCR Group 0-3 (2) 4000-4007: Area Code Development Pattern No. 0-7
	Assign a Route Pattern number to each area code for the Area Code Development Pattern number assigned by CM8A Y=A000.	<ul style="list-style-type: none"> Y=4000-4007 Area Code Development Pattern No. 0-4 (1) X-X...X: Area Code (Maximum 8 digits) (2) 1000-1015: Tenant Pattern No. 00-15
	Assign a Tenant number and a Route Pattern number to the Tenant Pattern number assigned by CM8A Y=4000-4007.	<ul style="list-style-type: none"> Y=1000-1015 Tenant Pattern No. 00-15 (1) 00-63: Tenant No. 00-63 (2) 0000-0255: Route Pattern No. 000-255
	NOTE: Set the tenant number assigned by CM0B Y=1XX>11 or CM12 Y=04 to the first data.	
	Assign the route pattern table with the desired properties and selection of appropriate routes.	<ul style="list-style-type: none"> Y=0000-0255 Route Pattern No. 000-255 (1) 1-4: Order of LCR Selection 1 : 1st 2 : 2nd 3 : 3rd 4 : 4th (2) XXX ZZ XXX: 000-255: LCR Pattern No. ZZ : 00-63: Trunk Route No.
<u>END</u>		

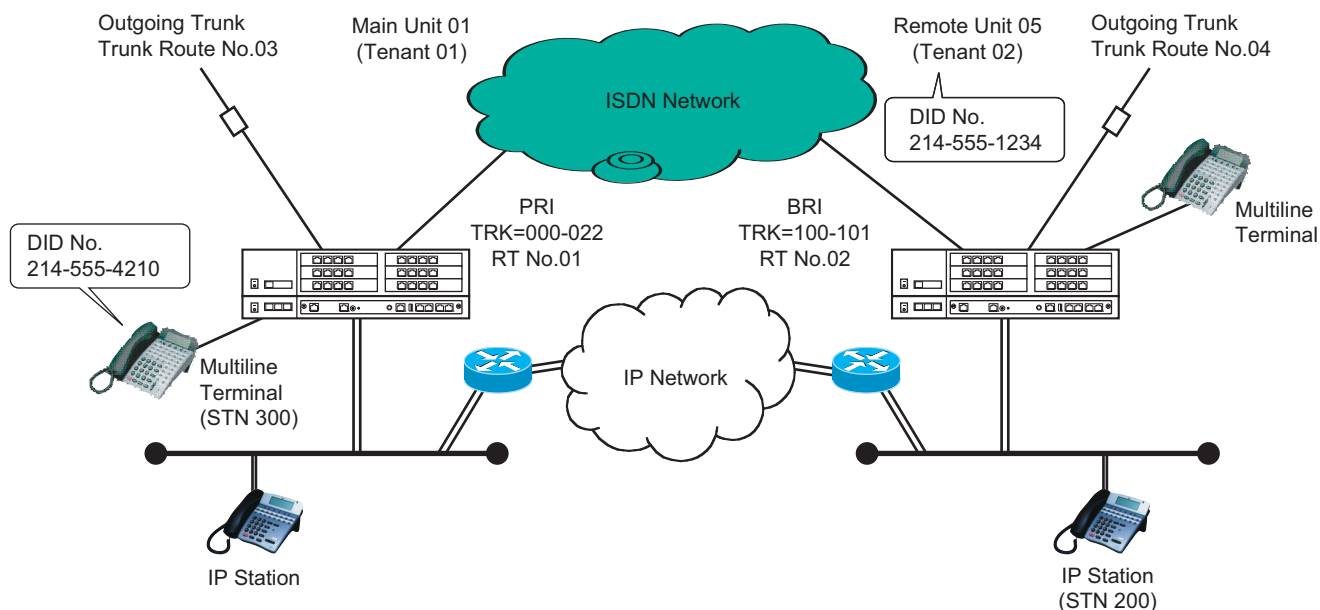
ISDN ALTERNATIVE ROUTING IN REMOTE UNIT SURVIVAL MODE



A	DESCRIPTION	DATA
CM64	Assign the destination of ISDN Alternative Routing method to the required tenants.	<ul style="list-style-type: none"> • Y=12 (1) 00-63: Tenant No. of Terminating Unit assigned by CM12 Y=04 (2) 0 : Destination station No. of each station 1 : Destination station No. of each tenant 2 : Destination station No. of each tenant + Subaddress 3◀: ISDN Alternative Routing disabled
	NOTE: <i>When the second data is set to "0" and CME6 Y=51 is set to "NONE", this command operates as well as second data is set to "1".</i>	
	Assign the destination of each tenant for ISDN Alternative Routing in Remote Unit survival mode if the 2nd data of CM64 Y=12 is set to 1/2.	<ul style="list-style-type: none"> • Y=13 (1) 00-63: Tenant No. of Terminating Unit assigned by CM12 Y=04 (2) X-XXXX: Destination C.O. line number (Maximum 26 digits) NONE◀: No data
CME6	Assign the destination of each station for ISDN Alternative Routing in Remote Unit survival mode if the 2nd data of CM64 Y=12 is set to 0.	<ul style="list-style-type: none"> • Y=51 (1) X-XXXXXXXX: Station No. (2) X-XXXX: Destination C.O. line number (Maximum 26 digits) NONE◀: No data
	NOTE 1: <i>When the system operates both CME6 Y=50 and CME6 Y=51, set the same number of the second data of CME6 Y=50 as the second data.</i>	
	NOTE 2: <i>When the second data of CM64 Y=12 is set to "0", the destination is set by this command.</i>	
<u>END</u>		

Example of Programming for ISDN Alternative Routing in Remote Unit Survival Mode

The following shows example of data programming for ISDN Alternative Routing in Remote Unit survival mode.



COMMAND CODE	1ST DATA	2ND DATA	MEANING
CM20 Y=0	1	803	3 digits station number for the station number first digit 1
	2	803	3 digits station number for the station number first digit 2
	3	803	3 digits station number for the station number first digit 3
	4	803	3 digits station number for the station number first digit 4
	90	101	Route Access (RT=01) for trunk access code 90
	91	102	Route Access (RT=02) for trunk access code 91

Continued on next page

COMMAND CODE	1ST DATA	2ND DATA	MEANING
CM12 Y=02	300	1515	Service Restriction Class for station No. 300
	100	1515	Service Restriction Class for station No. 100
	200	1515	Service Restriction Class for station No. 200
	400	1515	Service Restriction Class for station No. 400
CM12 Y=04	300	01	Tenant number 01 for station No. 300
	100	01	Tenant number 01 for station No. 100
	200	02	Tenant number 02 for station No. 200
	400	02	Tenant number 02 for station No. 400
CM12 Y=64	200	05	ISDN Alternative Routing Unit 05 (Remote Unit 05) for station No. 200 (IP Station)
CM15 Y=217	15	0	Allow ISDN Alternative Routing
CM30 Y=01	000-022	01	Tenant number 01 for PRI trunk (Main Unit)
	100	02	Tenant number 02 for BRI trunk (Remote Unit)
	101		
CM35 Y=276	03	0	Allow ISDN Alternative Routing for Incoming trunk route 03
	04	0	Allow ISDN Alternative Routing for Incoming trunk route 04
CM64 Y=11	01	90	Trunk access code for tenant 01
	02	91	Trunk access code for tenant 02
CM64 Y=12	01	0	Destination station number of each station for tenant 01
	02	2	Destination station number of each tenant + Subaddress for tenant 02
CM64 Y=13	01	NONE	No destination for tenant 01
	02	2145551234	Destination number 2145551234 for tenant 02
CME6 Y=51	300	2145554210	Destination number 2145554210 for station No. 300
	100	2145555000	Destination number 2145555000 for station No. 100

UNIT NUMBER FOR REMOTE UNIT ASSIGNMENT

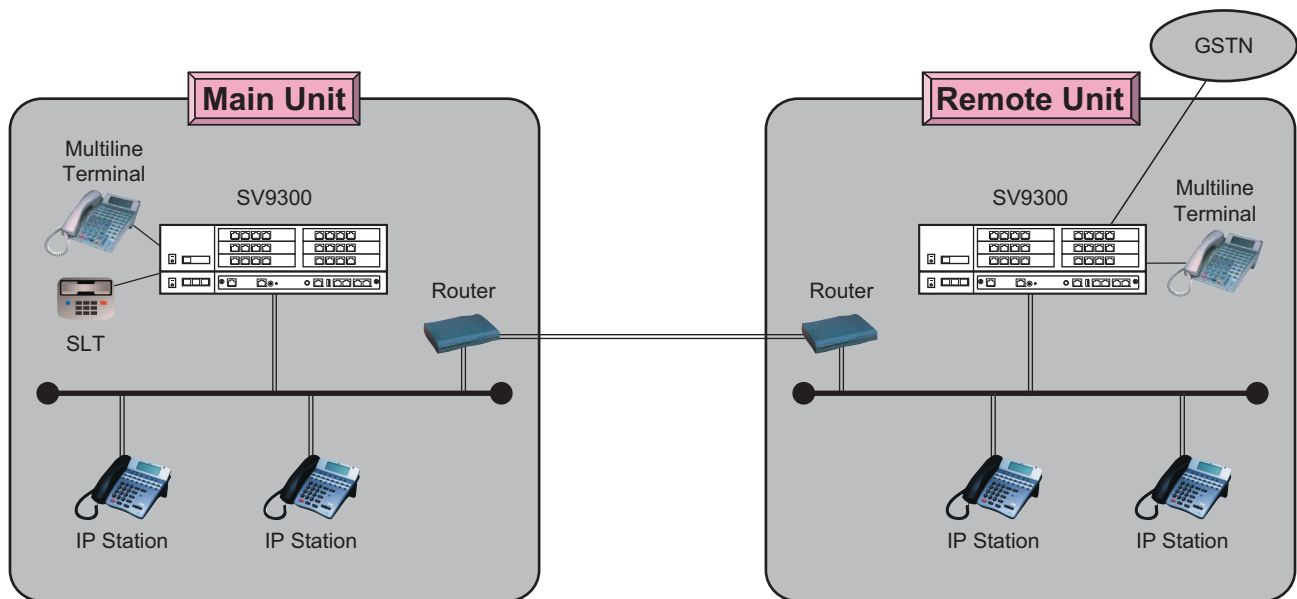
Assign the following data to each CPU blade of Remote Units.

START	DESCRIPTION	DATA
<div>CM0B</div>	Assign the Unit number for Remote Unit to each Remote Unit. <div>OFF LINE</div> <p>NOTE 1: <i>This command should be set in each Unit.</i></p> <p>NOTE 2: <i>The registration/clear of this data is available only in off-line mode.</i></p> <p>NOTE 3: <i>Set the SENSE switch of the CPU blade to “0” when operating the Unit as Unit No. “05-50” (for Remote Unit). The Unit functions as the Unit No. set by this data.</i></p>	<ul style="list-style-type: none"> Y=000 (1) 90 (2) 05-50 : Unit No. for Remote Unit NONE◀: Unit No. 01
END		

SAMPLE SYSTEM CONFIGURATION

The figure below shows the sample system configuration and the accommodated hardware in the Main Unit and Remote Unit of the sample system.

Sample System Configuration



Accommodated Hardware in Main Unit

01	GCD-8DLCA		04
02	GCD-8LCF		05
03			06

--

Accommodated Hardware in Remote Unit

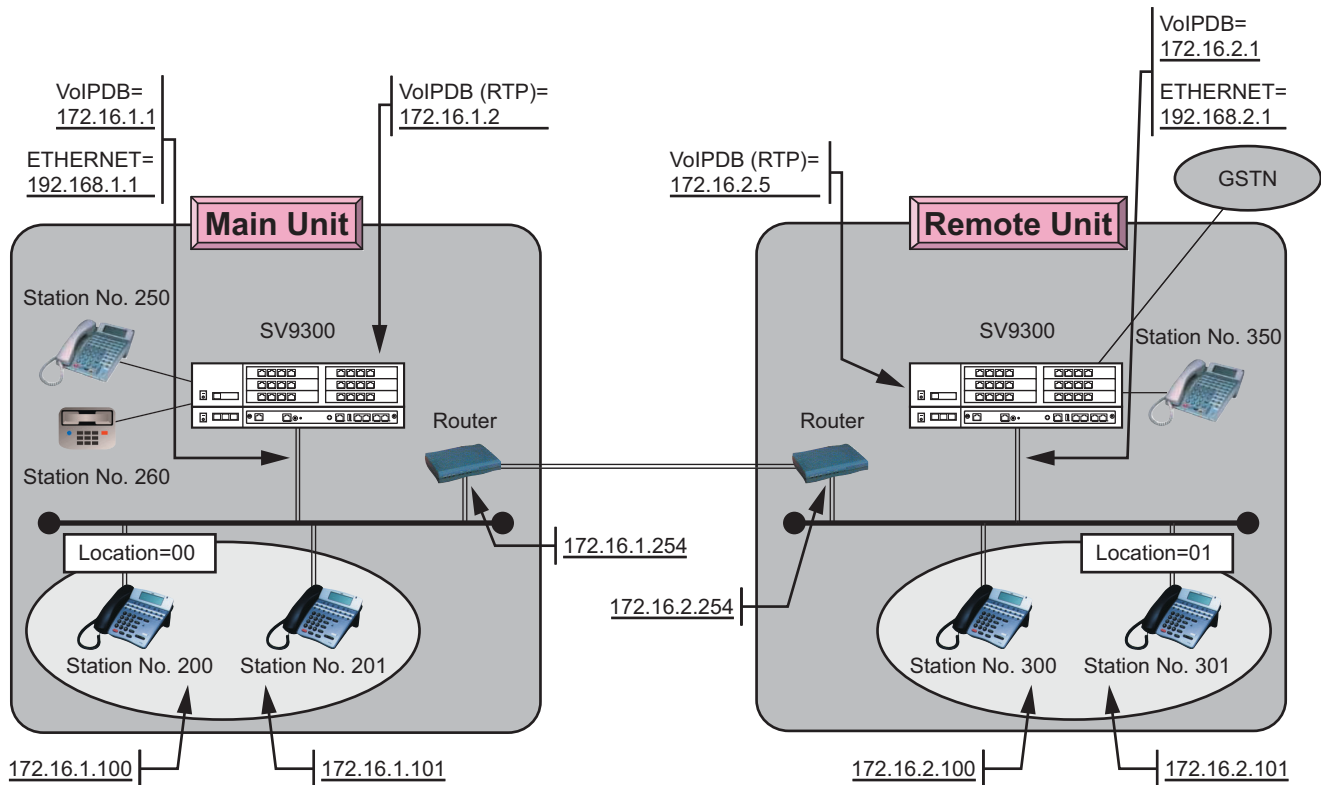
01	GCD-8DLCA		04
02	GCD-4COTA		05
03			06

--

CONDITIONS FOR SAMPLE SYSTEM

The following shows the conditions of sample system that are required to the system data setting.

Sample System Conditions



- (1) A Remote Unit number of the Remote Unit in this system is "05".
- (2) A CODEC within the unit is G.711 (64 Kbps), and a CODEC between units is G.729 (8 Kbps).

LIST OF COMMANDS

The table below shows the required command list and the data setting procedure that are set to the CPU blade of Main Unit in the sample system.

NOTE: Some cells are colored in order to see the table easily.

Command List Set to Main Unit

Setting Procedure		CM	Y	1st Data	2nd Data	Remarks	Reference Page
No.	Contents of Setting						
1	System data memory all clear	00	–	1	CCC	OFF LINE	Refer to System Manual
2	IP address for Main Unit (ETHERNET)	0B	001	00	192.168.1.1	Unit No.=01	Refer to Command Manual
3	Subnet Mask for Main Unit (ETHERNET)	0B	001	01	255.255.255.0		
4	IP address for Main Unit (VoIPDB)	0B	101	00	172.16.1.1	Unit No.=01	Page 3-27
5	Subnet Mask for Main Unit (VoIPDB)	0B	101	01	255.255.255.000		
6	Default Gateway address for Main Unit (VoIPDB)	0B	101	02	172.16.1.254		
7	IP address for Remote Unit (ETHERNET)	0B	005	00	192.168.2.1	Remote Unit No.=05	Refer to Command Manual
8	Subnet Mask for Remote Unit (ETHERNET)	0B	005	01	255.255.255.0		
9	IP address for Remote Unit (VoIPDB)	0B	105	00	172.16.2.1	Remote Unit No.=05	Page 3-27
10	Subnet Mask for Remote Unit (VoIPDB)	0B	105	01	255.255.255.000		
11	Default Gateway address for Remote Unit (VoIPDB)	0B	105	02	172.16.2.254		

Continued on next page

Command List Set to Main Unit

Setting Procedure		CM	Y	1st Data	2nd Data	Remarks	Reference Page
No.	Contents of Setting						
12	Numbering Plan	20	0	0	100	For COT in Remote Unit connection	Refer to Command Manual
13		20	0	2	803	3 digits station	
14		20	0	3	803		
15	Registration of Multiline Terminal in Main Unit	10	00	010101	F250	Station No. 250	Refer to Command Manual
16		12	24	250	0	Kind of Multiline Terminal	
17		20	1	0	803	3 digits station	
18		90	00	250, 01	250	My line setting	
19		93	–	250	250	Prime line setting	
20	Registration of IP Station in Main Unit	10	01	0000	F200	Station No. 200	Refer to System Manual
21		12	24	200	0	Kind of IP Station	
22		20	1	1	803	3 digits station	
23		90	00	200, 01	200	My line setting	
24		93	–	200	200	Prime line setting	
25		12	39	200	00	Registration of IP Station to Location No. 00	
26	Registration of IP Station in Main Unit	10	01	0001	F201	Station No. 201	Refer to System Manual
27		12	24	201	0	Kind of IP Station	
28		20	1	2	803	3 digits station	
29		90	00	201, 01	201	My line setting	
30		93	–	201	201	Prime line setting	
31		12	39	201	00	Registration of IP Station to Location No. 00	
32	Registration of Single line telephone in Main Unit	10	00	010201	260	Station No. 260 (DTMF)	Refer to Command Manual

Continued on next page

Command List Set to Main Unit

Setting Procedure		CM	Y	1st Data	2nd Data	Remarks	Reference Page
No.	Contents of Setting						
33	Registration of Multiline Terminal in Remote Unit	10	00	050101	F350	Station No. 350	Refer to Command Manual
34		12	24	350	0	Kind of Multiline Terminal	
35		20	2	0	803	3 digits station	
36		90	00	350, 01	350	My line setting	
37		93	–	350	350	Prime line setting	
38	Registration of IP Station in Remote Unit	10	01	0002	F300	Station No. 300	Refer to System Manual
39		12	24	300	0	Kind of IP Station	
40		20	2	1	803	3 digits station	
41		90	00	300, 01	300	My line setting	
42		93	–	300	300	Prime line setting	
43		12	39	300	01	Registration of IP Station to Location No. 01	
44	Registration of IP Station in Remote Unit	10	01	0003	F301	Station No. 301	Refer to System Manual
45		12	24	301	0	Kind of IP Station	
46		20	2	2	803	3 digits station	
47		90	00	301, 01	301	My line setting	
48		93	–	301	301	Prime line setting	
49		12	39	301	01	Registration of IP Station to Location No. 01	

Continued on next page

Command List Set to Main Unit

Setting Procedure		CM	Y	1st Data	2nd Data	Remarks	Reference Page
No.	Contents of Setting						
50	Registration of COT in Remote Unit	10	00	050201	D000	Trunk No. 000	Refer to Command Manual
51		30	00	000	00	Trunk Route No. 00	
52		30	02	000	04	Direct-in Termination for incoming C.O call	
53		30	04	000	300	Direct-in Termination setting to Station No. 300	
54		35	000	00	00	C.O trunk	
55		35	001	00	4	DTMF	
56		35	005	00	0/1	Release signal does nor arrive/Release signal arrives	
57	Registration of VoIPDB (RTP) in Main Unit	0B	201	00	172.16.1.2	IP Address of VoIPDB (RTP)	Page 3-27
58		0B	101	10	00	Registration of Unit to Location No. 00	Page 3-35
59	Registration of VoIPDB (RTP) in Remote Unit	0B	205	00	172.16.2.5	IP Address of VoIPDB (RTP)	Page 3-27
60		0B	105	10	01	Registration of Unit to Location No. 01	Page 3-35
61	Location Data Assignment	67	00	0001	0	CODEC List 0	Refer to System Manual
62		67	00	0100	0	CODEC List 0	
63		42	–	100	04	CODEC type=G.729a	
64		42	–	110	04	Payload Size=40 ms.	
65	License Activation Data Download	–	–	–	–	–	–
66	System Data Backup	EC	6	0	0	Data Backup to Flash Rom of CPU blade	Refer to System Manual


The table below shows the required command list and the data setting procedure that are set to the CPU blade of Remote Unit in the sample system.

NOTE: Some cells are colored in order to see the table easily.

Command List Set to Remote Unit

Setting Procedure		CM	Y	1st Data	2nd Data	Remarks	Reference Page
No.	Contents of Setting						
1	System data memory all clear	00	–	1	CCC	OFF LINE	Refer to System Manual
2	Unit number for Remote Unit	0B	000	90	05	OFF LINE	Page 3-41
3	IP address for Main Unit (VoIPDB)	0B	101	00	172.16.1.1	Unit No.=01	Page 3-27
4	Subnet Mask for Main Unit (VoIPDB)	0B	101	01	255.255.255.000		
5	Default Gateway address for Main Unit (VoIPDB)	0B	101	02	172.16.1.254		
6	IP address for Remote Unit (ETHERNET)	0B	005	00	192.168.2.1	Remote Unit No.=05	Refer to Command Manual
7	Subnet Mask for Remote Unit (ETHERNET)	0B	005	01	255.255.255.0		
8	IP address for Remote Unit (VoIPDB)	0B	105	00	172.16.2.1	Remote Unit No.=05	Page 3-27
9	Subnet Mask for Remote Unit (VoIPDB)	0B	105	01	255.255.255.000		
10	Default Gateway address for Remote Unit (VoIPDB)	0B	105	02	172.16.2.254		
11	Registration of VoIPDB (RTP) in Main Unit	0B	201	00	172.16.1.2	IP Address of VoIPDB (RTP)	Page 3-27
12	Registration of VoIPDB (RTP) in Remote Unit	0B	205	00	172.16.2.5	IP Address of VoIPDB (RTP)	Page 3-27
13	System Data Backup	EC	6	0	0	Data Backup to Flash Rom of CPU blade	Refer to System Manual

SETUP THE SYSTEM

After the system data programming in [LIST OF COMMANDS](#)  [Page 3-45](#), follow the procedure below. (The two routers should already be working correctly.)

STEP1: Turn power switch of the Main Unit on.

STEP2: Confirm that the CPU in Main Unit is working, and turn power switch of the Remote Unit on.
– The communication between Main Unit and Remote Unit starts.

STEP3: Confirm that the system data has been copying from Main Unit to Remote Unit.
– After 30 seconds, the RUN LED on CPU blade at Remote Unit flashes at 30 IPM.

STEP4: Confirm that the system data is backed up in Flash ROM of CPU blade at Remote Unit.
– SYSD LED on the CPU blade turns on, and the data back up starts. (It takes two minutes to back up the system data.)

STEP5: Confirm that Normal Mode operation starts.
– The CPU blade in the Remote Unit resets itself automatically, and starts Normal Mode operation.

TCP/UDP/RTP PORT NUMBER CONDITIONS

Tables below show the default TCP/UDP/RTP port number and range of the available TCP/UDP/RTP port numbers used in SV9300.

For Remote UNIT over IP

PORT TYPE	DESTINATION	DEFAULT PORT No.	REMARKS	NUMBER OF PORT USED	REFERENCE PAGE
Port for Remote Unit Control (UDP)	SV9300 (Main Unit)	3300	1024-65534 Assign by CM0B Y=1XX>40 DHM Self Port (Communication port between the Main Unit and Remote Unit), Common Port	1	Page 3-28
	SV9300 (Main Unit)	3300	Port per Remote Unit (CPU-CPU) Port per Remote Unit: Setting data of CM0B Y=1XX>40 + Unit No.	1/Unit	Page 3-28
	SV9300 (Main Unit)	50000	1024-65534 Assign by CM0B Y=1XX>30	1/Unit	Refer to System Manual

Continued on next page

For Remote UNIT over IP

PORT TYPE	DESTINATION	DEFAULT PORT No.	REMARKS	NUMBER OF PORT USED	REFERENCE PAGE
Port for Remote Unit Control (UDP)	SV9300 (Remote Unit)	3300	DHM Self Port (Communication port between the Main Unit and Remote Unit), Common Port= Port per Remote Unit (CPU-CPU) (3300 fixed)	1	Page 3-28
	SV9300 (Remote Unit)	3300	Port per Remote Unit (CPU-CPU)	1/Unit	Page 3-28